A QUALITATIVE PHENOMENOLOGICAL STUDY OF THE IMPLEMENTATION OF CONCEPT-BASED INSTRUCTION

by

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ABSTRACT

The purpose of this qualitative hermeneutic phenomenological study was to explore lived experiences of 8 North Carolina secondary teachers who received professional development and implemented concept-based instruction (CBI). Guided by adult learning theories including andragogy, transformational learning, and constructivist theory, interview questions addressed adults as self-directed learners who integrate learning as needed in daily situations, adults who reflect on personal perspectives to overcome misconceptions and institutional change as a result of a shift in beliefs, and adults who gain knowledge by making sense of new learning through individual experiences. The study reveals (a) teachers' perceptions of the adequacy of professional development, (b) teachers' self-assessments of progress in implementing CBI, (c) teachers' perceptions of consistency in implementation across classrooms, and (d) supports and barriers that influenced the implementation of CBI. Study participants recognized CBI as the basis for the organization and structure of the units and lessons used to promote student engagement and understanding around concepts. The study findings indicate the degree of implementation of CBI depends on individual understanding and the level of priority to use CBI recognized by school leadership. Recommendations directed toward educational leaders encourage the organization of a comprehensive professional development design to include administrative support of teacher implementation of new instructional strategies.

DEDICATION

The honor of earning this degree was made possible by the love and grace of God. His grace and mercy saw me through the entire journey. I dedicate this accomplishment to Him and my family members who waited patiently and anxiously to call me Doctor. I also dedicate this study to educators who design and deliver professional development, participate in professional development, and take part in the implementation of research-based instruction in the classroom.

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Introduction

Current legislation requires reform in public schools in the United States (U.S.). Early secondary schools, which were established near the beginning of the 20th century, only served 10% of 14- to 17-year olds, but in 1918, all states required children to attend elementary school (Wise, 2008). The design of original high schools did not include graduating all students prepared for college or a career. Nearly 7,000 students drop out of school on a daily basis (Fabry, 2010). Drop out data accentuates the current crisis in U.S. secondary schools. Although the United States has changed intensely in the 21st century, secondary schools have continued to operate in the same manner.

Often teachers are trained as content lecturers and secondary students are scheduled in one-size-fits-all courses without regard to individual needs or other individual factors (Wise, 2008). Boredom and passiveness plague students in classes where teachers address content to cover required state standards in preparation for assessments at the end of the semester or year. Teachers can be a part of the solution to address the predicament in schools with thoughtful and productive preparation in content and delivery of instruction (Fabry, 2010). The individual teacher decides on the instructional methods to use in the classroom.

The teacher holds responsibility for meeting the educational needs of each student in the classroom and providing instruction to assist in the intellectual development of all students. Events in the classroom influence good teaching (Danielson, 2007). Instructional strategies used by teachers are critical elements in the learning process for the success of each student. With the exception of distinct characteristics of the student,

the individual teacher has the most influence on student achievement (Dinham, 2007; Mehdipour, 2013; Southworth, 2010). Prior knowledge of students, teacher influence, and teacher personal beliefs in teaching procedures are essential in the study of student learning (Randler & Bogner, 2008). Research-based instructional strategies provide teachers with sound methods to teach students with different interests and learning styles

When teachers provide experiences centered on interesting and appealing instructional strategies, all students experience the best learning situation. The instructional practices of teachers have an enormous influence on student achievement. Change in instructional practices is necessary to accommodate student needs and diversity (Visockiene, Kidykaite, & Bagdonas, 2011). Student access to learning and achievement improves when teachers use research-based instructional practices (Little & Houston, 2003). A concept-based instruction (CBI) model contains rigorous and engaging ideas for students and teachers (Erickson, 2008). Connections between new knowledge and prior knowledge builds conceptual knowledge (Anderson et al., 2001). Providing students the opportunity to connect past learning, establishes a foundation for understanding new concepts and transferring knowledge to new situations.

This study included the exploration of teachers' awareness and lived experiences using CBI to provide insight about how secondary teachers understand, gain expertise, and implement CBI as a basis in understanding the need for successful implementation of the strategy. Chapter 1 emphasizes the recognition of CBI as an important instructional strategy in the educational reform process.

Background

America's past, present, and future relates to teaching. Teachers are critical figures in classrooms because they determine what to teach and how to teach it (Marszalek, Odom, LaNasa, & Adler, 2010). Students in the 21st century need skills to prepare them for college or a career. The current labor market requires higher order skills than required in previous centuries to enter the workforce, thus, indicating a need for greater level skills in math, reading, and writing by the completion of secondary school (Rosenbaum & Person, 2003). For students to gain these skills, teachers will need to explore and integrate theories and research-based strategies that promote greater thinking skills. Preparation for a century where higher-level thinking skills are important occurs more successfully in classrooms where teachers allow students to explore the subject area content through individualized instruction. The transfer of knowledge to new situations is a natural occurrence in combination with learner exploration and differentiation.

The need for improvement in the achievement of youth is urgent (Rosenbaum & Person, 2003). The reauthorization of the Elementary and Secondary Education Act (ESEA) addresses educational reform and the need for improved instruction in classrooms throughout the nation. Although school improvement has been studied widely, educators have found change a major challenge (Lunenburg, 2013).

Reform in education began in the 1950s when the launch of Sputnik represented scientific, technological, and engineering dominance of the Soviet Union (Steeves, Bernhardt, Burns, & Lombard, 2009). The government reacted to the implications of the launch of Sputnik by concentrating on and diverting resources to schools. The federal government began to develop national education policies and increase funding to schools

substantially in a major attempt at school reform for the purpose of the U.S. remaining competitive with international rivals (Steeves et al., 2009). National education policies provided a way to fix the troubles of schools, teachers, and students.

Additional reform in education spanned the 1960s and 1970s in a widespread attempt to fix a broken educational system (Balakrishnam, Rossafri, & Soon Fook, 2007). The U.S. needed to support research, train scientists, and fund the development of new curricula for public schools in the areas of mathematics and science (Johanningmeier, 2010). Public attention turned to the claim that public schools were not properly preparing American students to become key contributors of human capital. The discourse revealed the necessity to provide equal access to education for all students regardless of race, ethnicity, religion, gender, or social economic status (Johanningmeier, 2010). By the 1980s, it was apparent the nation's concerns were related to educational equality. The *A Nation at Risk* report prompted national interest in educational reform. In the 21st century, schools are challenged to address the needs of every student due to the increased focus on accountability emphasizing school wide performance and the development of subgroups of students (Lumpkin, 2010). The emphasis on accountability could diminish the quality of education if teachers are not using strategies for the benefit all types of learners. The diversity of current schools requires differentiated instructional methods with meaningful context to motivate students.

Abilities of individuals are influenced by changes in the present world, which makes it inappropriate and ineffective for teachers to base their work on teaching strategies of the 19th or 20th century (Visockiene et al., 2011). Students achieve academic success when teachers develop, implement, and monitor data-driven interventions

connected to instruction and individual student needs within the classroom (Little & King, 2008). It is necessary for teachers to launch instructional practices that support student learning (Anghleri, 2006). In order for teachers to make instruction a catalyst for improved learning, appropriate training for teachers is critical.

Traditionally, the focus in education has been imparting knowledge through memorizing and expecting students to learn ideas and concepts in an automated way. Learning through the traditional method of teaching has been unsuccessful with less than half of secondary students meeting basic proficiency standards (Twyman, McCleery, & Tindal, 2006). Teaching memorization does not promote a deep conceptual understanding. Thinking conceptually is a way to process information using patterns and connections to find individual significance to put knowledge in perspective through original and innovative ways.

Although *No Child Left Behind (NCLB)* legislation requires states to offer high quality professional development to teachers, many of the training workshops offered by educational corporations, universities, state governments, and local school systems neglect to effect sustainable change in the classroom behavior of teachers (Richards & Skolits, 2009). The reauthorization of *NCLB* provided a good chance to confirm the alignment of federal policy with research-based practices (Wise, 2008). Various learning theories outline efficient and effective ways for teachers to provide instruction in the classroom. Learning theories are valuable for meaningful instructional practice (Yilmaz, 2008). For example, when a teacher uses constructivist ideals, learner thinking is developed. Posing questions, solving problems, and constructing knowledge are a few of the formal experiences in a constructivist classroom (Yilmaz, 2008). In order for teachers

to understand and find meaning in learning new instructional methods, schools must design professional development to address identified needs of students and teachers and offer support in implementing the new strategies.

Even after decades of the spotlight on school reform, little has changed in the educational system. National efforts bolstered the old system rather than repairing it (Wise, 2008). Many schools and teachers continue to do what they have always done. Some adversaries of *NCLB* claim *NCLB* diverts attention from genuine teaching, learning, and experiencing curricula because there is no latitude for teachers to explore subject matter deeply, examine topics extending beyond conventional ones, or create authentic assessments to capture a variety of intelligences and modalities of learning (Steeves et al., 2009). The content of teaching and testing dictated by limiting standards has reduced schools and classrooms to one-size-fits-all factories.

Teachers typically cite unfamiliarity with instructional strategies, promoting student engagement, inadequate training regarding these strategies, and insufficient support in the classroom when they seek to implement new strategies (Richards & Skolits, 2009). Ineffective teachers accuse students, parents, and demographic factors for student failure (Rockwell, 2007). Outdated curricula fail to meet the needs of the current global economy and archaic teaching methods fall short of capturing the minds of the current generations of students (Forbes & Saunders, 2008). A change in pedagogical practice in the classroom can promote improved student learning (Leow, 2009). Teacher professional development can influence a teachers' instructional methodology.

Problem Statement

The successful use of research-based instructional strategies in secondary classrooms, grades 6 - 12, depends on key factors including the type of professional development provided and methods of support made available for successful implementation of the new strategies. Public schools are accountable for educating all students and ensuring they receive instruction from highly qualified teachers with high levels of achievement under *NCLB* (Kober, 2007). At the secondary level in public schools, many students face a challenge in various content areas with complex ideas causing some students to experience problems learning. Research-based strategies and routines provide tools for teachers to use for all students to learn and convey information more effectively (Boudah, Blair, & Mitchell, 2003). Teachers sometimes fail to use more interesting strategies to motivate students.

A continuously changing labor market in the U.S. demands for students to obtain adaptable and transferable skills, and global markets depend on the standards of education to meet current international benchmarks (Wise, 2008). Some schools are not effectively providing instruction in the appropriate knowledge and skills students need to succeed in postsecondary situations or life. Ineffective teaching is one of the many reasons some schools do not meet the demand of successfully teaching all students (Kober, 2007). Effective teaching is important in a diverse society where students are from different racial, ethnic, religious, and economic backgrounds. Teacher professional development is one source to improve the quality of U.S. schools because educational reform relies on effective professional development and the resulting improved instruction (Desimone, 2011). *NCLB* specifies the use research-based instructional

methods. Training and retaining high quality teachers can be difficult but necessary to ensure students are receiving a valuable education in preparation for the future.

Successful instruction in secondary classes not only includes traditional methods of learning but also incorporates the understanding of broad concepts (Twyman et al., 2006). Most students are not naturally able to link facts to concepts, but concept formation offers students the chance to appreciate ideas by making connections and understanding relationships among various points (McCoy and Ketterlin-Geller, 2004; Watson & Bradley, 2009). It is necessary for teachers to participate in high quality professional development that links to effective instruction methods such as CBI. Although thirty-four teachers in select North Carolina secondary schools received training on CBI, the impact training had on the implementation of CBI by these teachers in the classroom was unknown. Professional development is designed and offered to increase teacher knowledge and provide training for instruction that can improve student achievement (Desimone, 2011). Teachers must be willing to create meaning for the knowledge gained from professional development and use the understanding to implement the new instructional strategy in the classroom.

A qualitative study was used to explore the perceptions and lived experiences of secondary teachers who received professional development and implemented CBI. A phenomenological design was used to seek understanding of the real meaning and configuration of the observable phenomenon. The general population of the study consisted of secondary teachers in North Carolina who implemented CBI in their classrooms after professional development.

Purpose

The purpose of the proposed qualitative, phenomenological study was to gain insight into secondary teachers' perceptions of professional development and the implementation of CBI in the secondary classroom. Research is a methodical process for the production of understanding and knowledge as a result of engaging in the process (Merriam, 2009). The goal of the study was to explore the perceptions and lived experiences of teachers who implemented CBI after receiving professional development. Qualitative research is appropriate to understand an activity viewed from the perspective of participants in a research study (Bloomberg & Volpe, 2008). Phenomenology provides a means for participants to describe perceptions, senses, and knowledge based on immediate awareness and experience (Moustakas, 1994). The experiences of secondary teachers who implemented CBI revealed perceptions of whether or not the adequacy of professional development, support of instructional leaders, and consistency of implementation with fidelity across classrooms influenced the use of CBI.

Qualitative research is exploratory and permits specialists to obtain information about lived experiences and understand phenomena in a native state (Hunt, 2011). Phenomenology requires a focus on lived experience through the exact phenomena studied (Merriam, 2009). The specific population of the study consisted of eight secondary teachers in North Carolina public schools who received training and who implemented CBI. Phenomenology involves studying a small number of participants using vast and extended involvement to gather knowledge about models of meaning.

Significance of the Study

The research study sought to advance understanding of how teachers made sense of professional development and applied CBI in the classroom. The study will contribute to the educational community on a practical level with useful insight to school leaders and practitioners about the conditions lending to teacher learning and the implementation of CBI. A lack of understanding how educators learn about and make sense of instructional practices may conclude in failure to implement significant, maintainable change designed to meet local, state, and federal goals in districts and classrooms. The current study could lead to an appreciation for well-designed professional development for the successful application of CBI in the classroom.

This research study examined teachers' perceptions of the implementation of CBI in secondary classrooms. CBI requires teaching students to think beyond facts and to link information with concepts, generalizations, and theories based on mental constructs known as concepts, which provide the cognitive structure for thinking processes (Erickson, 2008; Klausmeier, 1993). Effective professional development plays a crucial role in efforts to improve education and presents teachers with the knowledge, skills, dispositions, and effective instructional strategies required to develop learning possibilities for all students (Balan, Manko, & Phillips, 2011). The actions, beliefs, and experiences of classroom teachers have a greater impact on student success and preparation for the future than any other factors (Robinson & Timperly, 2007). Appropriate professional development can educate teachers about the use of CBI to enhance facts and increase the level of student thinking in the classroom. Understanding how teachers assigned meaning to professional development and implemented new

instructional strategies was critical in considering the implementation of new strategies and the impact of the use of the strategy.

NCLB supports improved teacher quality as well as high quality professional development for teachers (Borko, 2004; Murnane & Papay, 2010). However, *NCLB* contains vague language thus leaving states with the discretion of establishing standards for the meaning of high quality professional development (Borko, 2004). The requirements set by individual states have not produced steady improvements in the quality of instruction provided by teachers and a survey of districts by Murnane and Papay (2010) indicated *NCLB* has hindered the ability of districts to recruit and retain high quality teachers and provide appropriate professional development. In recognizing the importance of high quality professional development as indicated in *NCLB*, the current study distinguished the nature of training provided for teachers to understand and use CBI in classrooms. The study could inform the plans of educational leaders and practitioners to design professional development and implementation plans with a focus on CBI.

Significance of the Study to Leadership

The study asserted to play a role in future studies and practices in education by highlighting teachers' perceptions of implementing CBI. Perceptions and experiences involving learning through professional development, implementation success, barriers, and supports may provoke professional development designers and other school leaders to consider how to advance instruction and learning by implementing research-based instructional strategies such as CBI with fidelity (Weinbaum & Supovitz, 2010). Examining trends before, during, and after the implementation of an educational

improvement is a way to determine the impact of the improvement (O'Day & Quick, 2009). The study has helped to narrow an existing gap in research about the exploration of the implementation of CBI based on teacher learning and understanding of meaning through training.

In the U.S., national policies support using thorough research methods to determine approaches in schools and classrooms advantageous for improving programs and practices (Leow, 2009). Since this study addressed the application of CBI, school leaders may use the results to develop a better awareness of how to plan professional development for teachers to understand and implement CBI. School leaders may see the need to develop coherent programs guided by common principles, specific teaching strategies, a common framework for professional development, and resource allocation to support learning and implementation (Robinson & Timperly, 2007). Findings associated with the current study can assist educational leaders with designing professional development to influence teachers making sense of the CBI strategy.

Nature of the Study

A phenomenological qualitative study was used to explore the perceptions and lived experiences of North Carolina secondary teachers who implemented CBI. The amount of time expended on professional development that highlights new strategies is a clear connection to the use of the strategies in normal instructional practice (Richards & Skolits, 2009). A professional development process including continued support provides an opportunity to change current practices (Little & Houston, 2003). Teachers' awareness of the professional development they received and their comfort in delivering the strategy they learned provided one basis for the study.

The researcher applied a qualitative approach to discover perceptions and experiences of teachers implementing CBI after training. Individuals relate to the world considering their own existence (Sartre, 1963). Qualitative research entails a focus on the context and integrity of the study rather than establishing a description solely from quantitative data (Banister, Burman, Parker, Taylor, & Tindall, 1994). Qualitative research is studied in the natural environment to interpret meaning contributed by people (Merriam, 2009) and is appropriate for a study of teachers' perceptions and experiences. In a quantitative study, existing theory guides the development of hypotheses connected to relationships among a group, topic, or circumstance (Borrego, Douglas, & Amelink, 2009) rather than obtaining an understanding of the meaning of findings obtained from participants in a qualitative way (Schreiber & Asner-Self, 2011). The perspectives of teachers provided insight into the understanding and implementation of CBI in the classroom.

A qualitative approach explores concerns produced by specific issues (Creswell, 2005). Information collected in a qualitative study documents human experiences about themselves or others in social and reflective ways (Saldaña, 2011). The qualitative exploration considered support from instructional leaders offered to teachers who implemented the strategy. A quantitative study requires counting events, amounts, or dimensions in contrast to abundant explanations of an identified phenomenon in qualitative research (Gelo, Braakmann, & Benetka, 2008). In the study, participants presented perceptions with insights about the implementation of CBI related to their confidence in using the strategy, the support provided by school leaders, and the fidelity of implementation across classrooms.

Qualitative methods may be useful in presenting new directions for future research using exploratory studies, open-ended questions, and interviews (Kalinowski, Lai, Fidler, & Cumming, 2010). The described qualitative study included semi-structured interviews with open-ended questions to understand the perceptions and lived experiences of eight teachers who implemented CBI in secondary classrooms. Qualitative researchers review text data from interviews and documents to describe events and identify themes or categories (Creswell, 2005). A semi-structured interview was used to understand the experiences of participants in implementing CBI and their perceptions of the support of instructional leaders. The interview questions were used in a pilot study prior to using them with the teachers in the study. Pilot study participants reviewed the interview questions and provided feedback on the relevance, precision, and clarity of each question. Feedback from the pilot study was recorded and the feedback was used to modify interview questions as needed before the study started.

A phenomenological approach is needed in some studies to provide awareness and deep understanding of human experience (Saldaña, 2011). A phenomenological study reveals the thoughts and feelings of study participants to others about a specific phenomenon. Phenomenology comprises the study of an observable event from the first person perspective (Gelo et al., 2008). Data gathered using a phenomenological approach explains scientific phenomena and extract conclusions about identified issues (Neuman, 2011). The researcher attempted to understand meaning relayed by participants about the implementation of CBI, teacher confidence, support, and fidelity of the implementation by teachers within the school.

Phenomenologists begin a study without preconceived notions in order to bracket ideas participants consider true (Bogdan & Biklen, 2007). Prior beliefs about the phenomenon of interest are put aside shortly, or bracketed, so they do not obstruct the actual elements of the phenomenon (Merriam, 2009). Edmond Husserl explored how bracketing allows individuals to go beyond everyday feelings and habits to concentrate on a phenomena without beliefs getting in the way (Fischer, 2009). When a researcher sets aside established beliefs, the awareness of the participants in the study becomes more transparent and prevalent.

A purposive sampling of eight secondary teachers in North Carolina public schools who implemented CBI was used in the study. The qualitative researcher attempts to understand a small number of participants' frame of reference or point of view (Gelo et al., 2008). While representativeness is a focus in quantitative studies, qualitative studies use purposive sampling to obtain rich information (McMillan & Schumaker, 2006) by collecting data in non-numerical form such as texts, pictures, videos, etc. (Gelo et al., 2008). Participants were asked to provide documents used to create and enhance a concept-based classroom. Merriam (2009) identifies lesson plans, student assignments, and objects in the classroom as documentary material appropriate for a qualitative study.

Research Questions

In a qualitative study, research questions contain a central concept, which is called a central phenomenon, and they provide the focus to explore a topic (Creswell, 2005). The problem at the beginning of a research study develops into critical research questions after the review of literature and the collection of information used to identify significant issues and determine how to evaluate them using the established questions (Berg, 2009).

The successful implementation of a new innovation requires active teacher engagement in a professional development program (Visser, Coenders, Terlouw, & Pieters, 2010). The focus of the study was to understand teachers' lived experiences of implementing CBI. The central question of the study was as follows: *What is the impact of professional development on teacher implementation of concept-based instruction in the classroom?*

Additional questions that supported the central question included the following:

1. How do secondary teachers perceive the adequacy of professional development they received in concept-based instruction as it relates to their confidence in implementing the strategy with fidelity?
2. How do secondary teachers self-assess their progress of implementing concept-based instruction?
3. What are the perceptions of the consistency in implementing concept-based instruction across secondary classrooms and of how instructional leaders are providing differentiated support?
4. What supports and barriers are influencing the implementation of concept-based instruction?

The researcher explored the CBI phenomenon in detail by using the supporting questions as the basis for 15 interview questions in the study. The supporting questions highlighted four areas of focus: (a) adequacy of professional development, (b) progress with implementation, (c) implementation across classrooms, and (d) supports and barriers of implementation. The interview questions contained conversational language to create a safe environment for open dialogue about these topics in relationship to the impact of professional development on the implementation of CBI.

Adequacy of professional development. Adult learning principles indicate autonomy and self-direction, life experience and prior knowledge, clearly defined goals, and relevancy as adult needs for an increase in their learning abilities in educational settings (Roche, Pidd, & Freeman, 2009). Features of programs with an impact on high-quality implementation include such factors as teacher empowerment and professional development explicitly designed to guide a teacher to a high level of confidence in using new strategies (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). The program may consist of workshops, seminars, teacher professional communities, and collaboration with other professionals. The appropriateness of the training in CBI and the certainty teachers feel in implementing the strategy correctly are important to understand successful implementation of instructional strategies by teachers. The knowledge about developing great teachers and using teaching resources in the most effective way is limited (U.S. Department of Education, 2008). Additional research was needed on teachers' perceptions related to professional development (Morewood & Bean, 2009). The study sought an understanding of teachers' learning, understanding, and sensemaking of CBI through professional development.

Progress with implementation. Reflection and self-assessment of practice are actions taken by an individual, and they improve teaching (Danielson, 2007). As teachers implement CBI, they monitor their progress to confirm their experiences about implementing the strategy. Self-assessment is a familiar way to evaluate the reaction of participants to a reform effort (Carroll et al., 2007). A teacher displays a distinguished level of reflection with thoughtful measurement of the effectiveness of a lesson and a consideration of the achievement of intended outcomes (Danielson, 2007). Self-reflection

can provide a recognition of the understanding of CBI. When individual teachers assess their implementation of a CBI, they identify strengths and weaknesses of using the process so they can improve.

A structured protocol can assist teachers and leaders who observe teachers implementing a new strategy in organizing conversation for reflection and analysis (Danielson, 2007). Instructional leaders responsible for observing and assisting teachers during the implementation of CBI will have opportunities to observe how the training received by teachers translates into practice. Critical aspects of CBI teachers should practice and administrators should observe during a classroom visit include a lesson focused on concepts, instructional strategies including a variety of best practices, and learning experiences and guiding questions that lead to enduring understanding (Erickson, 2007). Intense, supported, and job-embedded professional development is more likely to improve teacher understanding, classroom instruction, and student success (Wayne, Yoon, Zhu, Cronen, & Garet, 2008). Before teachers use a strategy such as CBI, it is important for school leaders to provide training to model the context and meaning for using the strategy in the classroom. When teachers can derive meaning from training and understand how to use new strategies in the classroom, effective implementation of the strategy is more likely.

Implementation across classrooms. Extensive training, materials, and support for teachers implementing a new strategy are necessary to improve the quality of implementation (Carroll et al., 2007). During the process of change, ongoing support is required because engagement and buy in are not enough to support comprehensive change (Weinbaum & Supovitz, 2010). After professional development in CBI, leaders

and professional development designers expect each teacher involved to implement the strategy in the classroom with fidelity. Complex programs are often adapted by implementers to be more effective or needs based (Weinbaum & Supovitz, 2010). It is beneficial to understand the perception of implementation of new strategies by different teachers within a school.

The beliefs of individual teachers may limit their implementation of new strategies (Hochberg & Desimone, 2010). Instructional leaders have the opportunity to observe what improves teaching and what develops engaging classrooms (Fabry, 2010). Observations, interviews, and surveys provide instructional leaders with insights into the challenges and successes associated with teacher implementation of new strategies and they highlight additional supports necessary for teachers (Desimone, 2011). Instructional leaders' observations of teachers helps them understand the types of support teachers need varies based on experience level and the type of professional development (Loucks-Horsley, Love, Stiles, Mundry, & Hewson, 2003).

Supports and barriers of implementation. Although current federal mandates in the U.S. require the use of professional development to develop high quality teachers, there is no direction on establishing professional development programs to build effective teachers (Nichols, Young, & Rickelman, 2007). Exposing barriers for professional development programs enables developers and teachers to prepare to deal with the issues (Niess, 2006). Professional development needed to make change is often complex, difficult, and sometimes lacks quality (Nichols et al., 2007). Gathering information about challenges and encouragement for the implementation of CBI may enlighten instructional leaders concerning ways to support teachers. Administrative support is a tool necessary

for assessing explicit components of implementation (Cohen, Kincaid, & Childs, 2007). The way teachers perceive support provided by instructional leaders during the implementation of a new instructional strategy such as CBI, influences the commitment to use the strategy.

Conceptual Framework

The teacher has a great amount of power over student learning through the decision of the teaching and the instructional methods used to teach (Hartfield, 2010). Choosing and implementing appropriate professional development for teachers impacts the choice of suitable instructional practices to use in the classroom (Desimone, 2011). The selection of evidence-based instructional practices to use for the development of competency and talent is an important decision. Learning depends on how well the teacher makes the most of excellent teaching methodology (Hartfield, 2010). Once a teacher experiences successful professional development, the professional development enhances the teachers' knowledge and skills, changes attitudes and beliefs, or both situations occur to improve the delivery of content (Desimone, 2011). Teachers can also improve their approach to pedagogy and advance student learning accordingly after receiving and making meaning of successful professional development.

Adult learning theories are emotional, social, physical, cognitive, and spiritual interconnected processes. (Kiely, Sandmann, & Truluck, 2004). Understanding learning theories, setting learning-outcome goals aligned with lifelong learning, and knowing strategies and practices are valuable characteristics for teachers (Lo, 2010). The separation of theory and practice leads to difficulty in transferring knowledge from one

setting to another (Freudenberg, Brimble, & Vyvyan, 2010). Joining theory and practice is significant in the development of deep understanding during the learning process.

Adult learning theories illustrate how adults gather knowledge, skills, and attitudes (Abela, 2009). Life experiences of adults form interests and learning abilities (Merriam, 2011). Adult learning theories depict how adults learn and take into account various influential factors of how adults learn differently from children (Marquadt & Waddill, 2004). Andragogy, and transformational learning are "traditional adult learning theories with a focus on learning processes and characteristics of individual adult learners" (Kiely et al., 2004, p. 18). Constructivist theory promotes skills and problem solving using inquiry through critical thinking to encourage learners to develop opinions about their environment (Blaik-Hourani, 2011). Trainers of adults should build on the experiences and knowledge of learners to provide a familiar context for training (Merriam, 2011). Districts are able to offer effective, maintainable professional development when designers and planners are aware of adult learning theories (Trotter, 2006). Using learning theories to develop professional development provides a foundation for learning based on research-based models.

Andragogy. Andragogy is based on the assumption adults learn independently, are self-directed, have differing degrees of experience, integrate learning as needed in everyday life contexts, have an immediate interest in problem-centered approaches, and are motivated more by internal than external factors (Abela, 2009). Malcolm Knowles proposed the andragogical model as a learning theory specific to the unique adult learner who brings varied knowledge, experience, and independence to the classroom (Kiely et al., 2004). Andragogy has come forward as a dominant framework in adult teaching over

the past 40 years in spite of restraints and challenges (Holton, Wilson, & Bates, 2009). Andragogy concerns teaching individuals who are primarily responsible for their own lives indicating it is the art of teaching adults. Adults engage in learning situations to address performance centered or problem centered matters in their lives (Forrest & Peterson, 2006). Teachers expect learning situations designed for them to provide the understanding to address specific circumstances in the classroom so it is necessary to understand how adults learn to design appropriate training. A focus of this study was the investigation of the bearing of adult learning on sensemaking and understanding. Teachers' perceptions of professional development provided comprehension of how adult learners became aware of the meaning of professional development and how they planned to use the learning in the classroom.

The field of education advances when teachers continue to learn during time provided to participate in professional development (Morewood & Bean, 2009). Trainers design professional development to meet participants' interests and needs using the andragogical model to involve adult learners in planning objectives and activities and solving real-world problems (Chan, 2010). Teachers engage in their learning to create a more constructive and successful experience when they are provided the recommended amount of time, ideally 25% of the workweek, to participate in professional development (Morewood & Bean, 2009). Intended outcomes from professional development are realized when teachers learn in the context of specific situations and when they use experience and prior knowledge to interact in the context. In the study, understanding how adult learners used contextual knowledge from training about CBI in the classroom was critical.

Transformational learning. The transformational learning theory assumes most people are unacquainted with the source of the development of their beliefs, values, and actions (Kiely et al., 2004). Transformational learning involves a shift to a more open perspective in contrast with existing perspective (Cranton, 2011). Transformational learning helps adults recognize and overcome distorted beliefs in their personal perspectives leading an individual to advance in guiding observations, interpretations, and actions (Kiely et al., 2004). An examination of previous beliefs, values, and assumptions provides the potential for transformative learning, the actual shift in beliefs and the resulting changes (Cranton, 2011). A target of this study was to recognize the situations in existence for teachers who successfully implement CBI by reviewing how they construct meaning and learn about CBI. As learners, teachers bring experiences and beliefs into training situations to assist in assigning meaning and understanding. An expectation of the study was to recognize how teachers perceived the adequacy of professional development and their confidence in the implementation of CBI.

The most powerful way to develop transformative learning is to provide students with direct, engaging, and reflective experiences of understanding to help the learner become aware of self (Taylor, 2007). Reflecting on current practices and beliefs provides a basis for understanding the need for a change in values or actions. The adult learner is able to determine the need for change when personal viewpoints are compared to current perspectives. Implementation of a strategy such as CBI is connected to the depth of teacher learning and understanding of professional development. This study explored how knowledge gained from professional development is converted for use in the classroom.

Constructivist theory. The constructivist theory asserts an individual builds knowledge when interacting with the environment through discourse, negotiation, and consensus building. Although constructivism is a vague concept, many schools consider it the most suitable method for teaching and learning (Powell & Kalina, 2009). Prior experience, motivation and self-direction by learners are essential components to enhance adult learning (Polansky, 2011). Learners reflect on personal knowledge and practices to create meaning. In this study, sensemaking provides insight about how a teacher understands CBI and how acquired meaning inspires implementation. The current study explored sensemaking as it related to discussions among teachers and their understanding of how to implement CBI across classrooms in a school.

Knowledge cannot transfer from faculty to student but must be constructed actively through deep learning for students to retain what is learned (Lo, 2010). For teachers to use constructivism effectively, they have to know where students are in their learning or the current stage in their knowledge of the subjects so they can assist students in constructing personal meaning with new information (Powell & Kalina, 2009). Constructivist theory supports and is generated from individual experiences (Hartfield, 2010). Teachers teach constructively if they have an understanding of necessary strategies and practices. Teachers in the study will share perceptions of their confidence in implementing CBI after receiving professional development. Constructivism is the next important step in educational reform (Powell & Kalina, 2009). Change and reform cannot occur in a classroom if the teacher is not the active facilitator of change. Transferring knowledge requires the use of a research-based strategy such as CBI as a vehicle to promote deep understanding in a classroom. Teachers in this study assessed

their own progress with the implementation of CBI, which provided insight about the transfer of knowledge from the professional development setting into the classroom.

Definitions

The uses of some operational terms vary slightly from the typical meaning. Uniform definitions are necessary for effective communication and evaluation of literature and standardization of research (Malbrain & Cheatham, 2011). In this study, various terms required explicit understanding to acquire meaningful understanding of the study. A discussion of the definitions of these terms is included in this section. The definitions provided extend from expert opinion as evidenced in the literature.

Concept: a thought or an abstract idea simplified from specific instances (Concept, 2012); timeless, universal, abstract, and broad ideas (Daugherty, Custer, & Dixon, 2012); idea with specific information about a topic that is transferrable among different contexts (Birbili, 2007).

Concept-based instruction: a three-dimensional model of teaching that uses concepts, generalizations, and guiding questions to help students know, understand, and do (Erickson, 2007).

Fidelity: measure of how well an innovation is implemented when compared to the original model (Borrego, Cutler, Prince, Henderson, & Fryod, 2013).

Mental Models: cognitive structures involving reasoning, understanding, and knowledge of the phenomenon they represent (Goel, Johnson, Junglas, & Ives, 2010).

Professional development: "a comprehensive, sustained, and intensive approach to improving teachers' and principals' effectiveness in raising student achievement" (Islas, 2010, p. 16); learning explicitly embedded in practice and dialogue and provides

instruction designed with conceptual connections, appropriate representations, and varied models (Desimone, 2011).

Secondary: grade levels 6-12

Assumptions

Several assumptions existed in the qualitative, phenomenological study. One assumption was study participants received similar professional development in CBI. The eight secondary teachers in North Carolina received professional development in CBI as a part of a project with social studies consultants from the state department of education. Teacher perception of effective professional development is important (Morewood & Bean, 2009). A second assumption was teachers who participated in the study were implementing CBI with as much fidelity as possible.

Teachers honestly reporting responses in the survey based on their lived experiences and perceptions was a third assumption of the study. Self-disclosure permits researchers to gather information about subjects' perceptions of their practices (Berg, 2009). Participants were informed of the coding of interview responses for the study. Participants signed a consent form that detailed confidentiality between the researcher and participant as well as the option for participants to remove themselves from the study without consequence at any time if needed.

The final assumption was researcher bias was eliminated. Bracketing, setting aside personal interests and experiences, cultural factors, and feelings that may persuade the way the researcher views the data in a study is used so the researcher can view the data with fresh eyes (Fischer, 2009). The process used by phenomenologists to put aside everyday meanings and judgments is epoché and it was used prior to interviewing

participants in the study (Moustakas, 1994). Setting aside bias and preconceived notions is necessary to obtain information disclosed by teachers as it pertains to their experiences and insight.

Scope, Limitations, and Delimitations

The qualitative phenomenological study explored the perceptions and lived experiences of teachers implementing CBI in secondary classrooms. The scope of the study was limited to eight secondary teachers in North Carolina public schools who were interviewed to determine perceptions and lived experiences of implementing CBI. Open-ended questions were used for data collection to explore the perceptions and lived experiences of the participants.

Limitations were present in the study. The first limitation concerned the use of a small sample of participants. Findings were useful although limited to the subjects in the study, which is an indication more care is needed when generalizing the results (McMillan & Schumacher, 2006). The application of semi-structured interview questions allowed for detailed feedback from participants. The second limitation of the study was some teachers were unable to participate due to the busy schedules in conflict with the timeline for the study. The final limitation reflected the limited sample size may not be large enough to generalize the data to a larger population.

Delimitations inspired the study. The study centered on CBI as the only instructional approach in the classrooms of select secondary teachers in North Carolina. Generalized results based on the perceptions and lived experiences of middle and high school teachers may differ from the lived experiences of teachers at elementary and college levels. Teachers used adapted models of CBI rather than the authentic methods of

the instructional strategy as presented during the professional development sessions. Since the interviews were not conducted fact-to-face, the quality of answers could have been skewed. In spite of the delimitations, the information obtained during the study can be useful for future studies concerning the implementation of CBI in classrooms at various grade levels.

Chapter Summary

This phenomenological qualitative research study focused on secondary teachers' perceptions of implementing CBI after receiving professional development. The study explored teachers' perceptions and lived experiences of the adequacy of professional development. The support of instructional leaders and the consistency of implementation across classrooms was investigated to provide additional insight into the use of CBI.

Chapter 1 presented an introduction and background information supporting the need to use the research-based strategy, CBI, to improve student learning. Teachers use the strategy, CBI, to link facts and concepts to support diverse learners (McCoy & Ketterlin-Geller, 2004). The chapter presented a problem statement and purpose for emphasis of the need for teachers to learn and implement new methods of instruction. The key to successful schools is the understanding and implementation of new instructional strategies by teachers (Klein & Riordan, 2009). The conceptual and theoretical frameworks outline adult learning, situated learning, transformational learning, and constructivist theory to provide an understanding of adult learning and the application in context. The significance of the study supports the need to conduct the study and nature of the study authenticates the qualitative phenomenological design.

Chapter 2 will display an in-depth literature review exploring adult learning and CBI. The research about professional development featured in instruction is minimal (Klein & Riordan, 2009). A review of supporting topics will provide detail about the historical knowledge and current knowledge concerning the implementation of CBI in secondary classrooms.

Chapter 2

Review of Literature

The current study explored how teachers learned about a specific instructional strategy, CBI, and how they implemented the strategy in secondary classrooms. An attempt to understand the implementation of CBI involved investigating influences on teacher learning and the use of knowledge gained in the classroom as a part of practice. Teachers experience challenges when implementing new strategies but they are more likely to implement a practice if leaders eliminate barriers and provide support for quality implementation and success (Knight, 2009). Teacher learning and the transfer of knowledge for realization in the classroom was considered in the effort to understand the implementation of CBI.

Different instructional techniques appropriate for every student can provide an impetus for student learning (McMurray & Sorrels, 2009). Teachers are in a position to receive professional development that empowers them to develop pedagogical practice and elevate the capability of learning for all stakeholders (Balan et al., 2011). Understanding the implementation of CBI involved examining professional development used to train teachers for change, teachers' interpretation of the training, teachers' experiences with implementation, and supports and barriers with influence on teacher learning and the implementation of CBI. This chapter includes a review of the history of reform and educational policy that supports change, professional development, sensemaking, training transfer, and the relationship of these factors to teacher learning and their implementation of CBI in secondary classrooms.

Documentation

The literature review includes information from research literature and other sources with highlights on reform, instructional practices, professional development, and other relevant topics in education. Peer-reviewed articles and other documents retrieved from the University of Phoenix Library served as sources of information for the study. Specific databases within the library used in the study included EBSCOhost, ProQuest, Gale PowerSearch, and ProQuest Digital Dissertations. Related websites such as the United States Department of Education and the North Carolina Department of Public Instruction also provided relevant information for the literature review in support of the study.

History of Educational Reform

The routine of preparing teachers to facilitate learning among students with various backgrounds involves exposing teachers to the best practical strategies necessary to ensure academic growth among students (Bartolomé, 2004). The professional development of teachers is important in the improvement of schools. A widespread reform of teaching has been a focus in the U.S. in past and present times as a way to address improving the outcomes of U.S. schooling.

The launch of Sputnik in 1957 promoted school reform as a focus in the U.S. because many Americans began to doubt the value of schools (Finley, 2000). The Restructuring Movement in education supported local site-based management to provide principals, teachers, and parents more involvement as decision-makers (Finley, 2000). Site-based management can empower stakeholders with flexibility to address local needs (Fitzpatrick, 2012). Schools under site-based management rely on teachers to use

educational innovations to adapt instructional methods and techniques to meet student needs (Dee, Henkin, & Pell, 2002). On-going professional development for teachers is necessary to meet shifting academic and learning needs of current students in a global society (Donder, 2011; Miller, 2009). It is critical for professional development to have a significant impact on the quality of teaching and learning in the classroom (Donder, 2011). High quality instruction addresses the concern of "America's children need highly effective teachers" (Scheeler, 2008. p. 145). Professional development designed to promote instructional strategies can be used to develop teachers who construe meaning and understanding for implementation of the strategy in the classroom.

Teacher training in postsecondary organizations is influential on teacher practice but "most of the nation's 1,450 schools, colleges, and departments of education are doing a mediocre job of preparing teachers for the realities of the 21st century classroom" (Messer, 2010, p. 83). Once pre-service teachers become in-service teachers, a continuous professional development program is needed to promote changes in the classroom (Girotto Júnior & Fernandez, 2013). The successful implementation of a strategy such as CBI learned during professional development depends on how teachers learn and construct meaning of the strategy. School leaders are in a position to maximize support and decrease barriers in the way of successful implementation of newly learned strategies. Various factors interplay with the construction of meaning teachers and leaders develop by interpreting, understanding, and implementing an instructional strategy such as CBI.

Teachers are responsible for instruction, and it is a necessity for teachers to participate in professional development to reinforce the responsibility (Ballard & Bates,

2008). Schools and teachers direct professional development toward improving instruction due to the pressure of accountability systems, but different districts and school respond to the pressure with various types and quality of professional development for teachers (Hochberg & Desimone, 2010). Professional development is structured differently in most school districts; however, teachers cannot be expected to make necessary changes involving knowledge, beliefs, and habits of practice with the most current types of professional development (Smith, 2001). In order to understand how CBI is implemented, concentration must be placed on how teachers learn and how new knowledge is transferred in actual classroom practice.

Educational Policy for Change

Public and government interest in education and school reform resurfaced with the National Commission on Excellence in Education's publication of *A Nation at Risk*. In the *A Nation at Risk* report, the commission recommended improving teacher quality including higher standards for teacher preparation programs (*Education Week*, 2004). Unfortunately, many educators adhering to reform efforts practiced adding more but not doing things differently. It is reasonable to consider sometimes teaching is the reason for poor understanding by the student (Cakici & Yavus, 2010). Attention given to training teachers to understand effective instructional strategies is important in the professional development of teachers.

Current federal funds provided for school reform "are authorized for professional development, instructional materials, supporting educational programs and parental involvement promotion" (Tavakolian & Howell, 2012, p. 72). In previous school reform, the U.S. Congress provided funding for schools to implement programs with "research-

based strategies, comprehensive and aligned activities, and measurable goals and benchmarks" (Kuo, 2010, p. 391). The current federal influence on assessment, accountability, and time-intense improvement in education is *No Child Left Behind* (Kuo, 2010). The requirements of *NCLB* slant toward elementary and middle grades, and the result of the act has been schools and districts collecting evidence of achievement and graduation data to indicate the enormous task of the work necessary at the secondary level (U.S. Department of Education, 2008). The data generated through *NCLB* corresponds with the prediction in *A Nation at Risk* that anticipated secondary school deficiencies would threaten the quality of the whole K-12 educational system (U.S. Department of Education, 2008). The nation may still be at risk if teachers are not participating in well-designed professional programs and understanding the meaning of the training well enough to include the tenets of the training in regular classroom practice.

NCLB indicates a highly qualified teacher "must have a bachelor's degree, full state certification or licensure, and prove they know each subject they teach" (U.S. Department of Education, n.d.). Furthermore, middle school and high school teachers must prove they know a specific subject with a major in the subject or credits equivalent to a major in the subject, passage of a state-developed test, a state issued advanced certification, or a graduate degree. Highly qualified teachers may not be very effective in the classroom if they do not generalize acquired teaching techniques to actual experiences (Scheeler, 2008). *NCLB* requires current teachers to show proof they are highly qualified through a combination of teaching experience, professional development, and knowledge acquired over time as a teacher.

Accountability in educational organizations is the center of the current era. Throughout the U.S., teachers administer state mandated tests each year, and schools and teachers are accountable for student performance (Ballard & Bates, 2008). Educators in the U.S. and China both agree a test-based educational system impedes critical thinking, problem solving, and innovation (Preus, 2007). While the U.S. adheres to *NCLB* policy with accountability and other mandates, China has increased momentum to deemphasize exams and promote creativity and innovation to compete in a global society (Preus, 2007). Strict accountability can lead to the practice of teaching to the test. Because of this practice, teachers favor preparing for the test as a priority rather than using effective instructional strategies. Learning and student achievement are not guaranteed because of accountability.

Policymakers are far removed from the classroom level, and policy perspective often presents a challenge with the conception of meaningful change in the classroom. Improvement does not automatically come with change. Policy, people, professional development design, adult learning, sensemaking, and the existence of supports and barriers influence implementation of effective instructional strategies.

Situated Cognition

In order to understand teacher learning about the instructional strategy, CBI, it was important to have an idea of how trainers presented the strategy to teachers in training and the influences on teachers' understanding of the meaning and use of the strategy. Essential ideas in situated cognition as it relates to learning show some influences on teacher learning. Situated cognition refers to an individuals' personal perception, visualization of actions, and displayed behaviors (Abullah & Cerri, 2005).

Knowledge develops, and individuals learn skills in natural settings. All learning occurs in situation dependent context (Goel et al., 2010). A persons' reality develops from mental engagement and interaction in the physical environment using prior knowledge to clarify the environment and new knowledge from the environment to form current mental models (Goel et al., 2010). Teachers receive professional development with the expectation to implement the strategies learned in a classroom setting with students. During professional development, teachers can benefit when learning occurs within practice and reflection.

Abdullah and Cerri (2005) indicated situated cognition is based on the idea of customizing human thought and action to surroundings along with social-physical settings, perception, and conception. The basis of situated cognition is the understanding of how daily actions explain the situation of human beliefs and how they are adapted in the context of surroundings. Teachers expand knowledge and cultivate skills in professional development activities that offer authentic experiences for the ultimate goal of using the new knowledge and skills in upcoming situations (Szymanski & Morrell, 2009). Teachers have varying degrees of experience and professional needs. Professional development planners can consider ways to configure individual teachers and groups of teachers to learn instructional strategies based on differences or similarities in needs and other factors. Instruction and teaching can change substantially when learning new strategies is integrated within contextual situations in the classroom and teachers are allowed to learn and implement new strategies in groups or as individuals. The state of an individuals' current mental model influences knowledge development. When an individual learns, specific knowledge may change leading to a modification of a persons'

mental model (Goel et al., 2010). Professional development programs should consider prior knowledge influences learning, new knowledge is acquired by individual construction, and construction of knowledge includes addition, creation, modification, refinement, restructuring, and rejection (Loucks-Horsley et al., 2003). Teachers who learn about CBI implement the strategy as it aligns to the needs of the students and in consideration of the appropriateness for learning to occur. An individual's reality is constructed when their mental model is engaged with the physical environment by using prior knowledge to make sense of the environment and new knowledge to update existing mental models (Goel et al., 2010). Teachers construct knowledge and learn new skills within particular physical and social contexts when schools provide professional development to cultivate quality instruction necessary to meet the identified learning needs of the students within the school.

This study examined professional development designed to provide teachers with knowledge about the specific instructional strategy, CBI, to improve current practice. Although professional development continues to be a key strategy in educational reform, the focus and method of delivery has shifted with the intent of increasing the pedagogical and content understanding of teachers. The interaction of teachers or groups of teachers to engage in specific cognitive processes is situated cognition (Elsbach, Barr, & Hargadon, 2005). Situated cognition represents a foundation of learning as a social practice. Szymanski and Morrell (2009) pointed out long-term acquisition of new information, self-reflection, practice, collaboration, support, and a network of learners can lead to sustained changes in teacher instruction. Teachers implement new learning in classroom environments in conjunction with colleagues who receive the same

professional development and with assistance to integrate. Teachers shared experiences implementing CBI to learn about the successes and challenges of each other.

Learners experience cognitive dissonance when new ideas fail to support current thinking. Teachers may reject new information in conflict with current practice. Learning is a change process, which merits consideration when designing adult professional development. Current knowledge is changed by adding new knowledge aligned with existing ideas, by creating ideas from existing knowledge, by modifying existing ideas based on new information, or rejecting existing knowledge when more robust ideas come into existence (Loucks-Horsley et al., 2003). When teachers learn about CBI, a balanced training employs stability between realistic application and the development of new philosophy, beliefs and change in practice. Situated cognition theory designates learning is situated in a specific context where an activity happens and when a person makes sense of the environment by incorporating new knowledge gained from the environment in current context (Goel et al., 2010). Situated cognition is an ongoing process that describes the action of sensemaking. Sensemaking includes environmental scanning, interpretation, understanding, and action (Elsbach et al., 2005). In this study, secondary teachers received training on CBI and implemented this type of instructional strategy after learning in the specific context by connecting prior knowledge of instruction with a newly constructed meaning because of professional development.

Adult Learning

Teacher learning is important for the success of teachers and students and an exploration of adult learning is critical for gaining insight into the implementation of instructional strategies learned through professional development. The introduction of

adult learning in the 1920s led to understanding the specific needs of adults and the critical differences in children and adults as learners (Cercone, 2008). Professional development planners design training to meet a need or fill a gap in practice or knowledge. Adults pursue knowledge to obtain specific information because developmental tasks or life changes often create the need to know causing adults to have the need to learn (Holyoke & Larson, 2009). Professional development is often designed without consideration to disruptive responsibilities and situations of adults. Adult learning research supports the assumption adults are self-directed, have a need to know, use experience in learning, are ready and have orientation to learn, and have internal motivation (Chan, 2010). Professional development design should be in the context of individuals who receive the training. Adults have many experiences and pre-established beliefs when they enter learning situations and the way adults learn impacts the effectiveness of professional development.

Andragogy is the art of teaching adult learners in a way to promote collaboration between the student and instructor to work together to meet the needs of the learners (Chan, 2010). Individuals who teach adults help them learn by extending the ability of adults to behave as self-directed learners (Taylor & Kroth, 2009). Self-directed learners actively participate in learning regardless of support by others. The practical knowledge of the adult learner is an important consideration when designing professional development. Learning is meaningful when it provides a connection to the individual learner. Self-directed learners take initiative and are known for independence, persistence in learning, self-discipline, self-confidence, and aspirations to learn more (Cercone, 2008). Adult learners who are self-directed are more motivated and resourceful. Adult

learning theory acknowledges the adult learner is self-directed. The experiences of adult learners serve as a resource during learning. Adults need to gain understanding through their own experiences rather than through the experiences of others (Taylor & Kroth, 2009). Teachers build reality of teaching in the classroom based on prior knowledge, beliefs, experiences, and training.

Self-directed learners receive support through professional development that encourages the use of existing knowledge. Adult learning approaches can encompass respect, trust, support, and collaboration (Henschke, 2011). Professional development designed around adult learning theories is effective if learners have the opportunity to apply learned concepts in creative ways in the classroom. Andragogy is learner centered with a focus on the application of knowledge to real situations. Professional development with attention on adult learners has an emphasis on trainers who also serve in a mentor capacity to support students as self-sufficient learners. Self-directed learners apply knowledge gained from professional development in contextual ways throughout instruction provided to students. After receiving training in new knowledge such as CBI, self-directed learners adapted the learning to apply to their own educational experience.

Experiential learning is an important aspect of andragogy because it provides a foundation for adult learning. When learners connect present experiences with past events and possible future occurrences, experiential learning occurs. Adult learners engage in direct experiences, reflect to increase and clarify knowledge, and build skills through experiential learning (Klein & Riordan, 2011). Experiential learning consists of knowledge, prior knowledge, and reflection combined with analysis and assessment of action as a part of personal growth (Cercone, 2008). Learners have individual preferences

for obtaining and converting information for meaning. Learning is a cycle of concrete experiences, reflective observation, abstract conceptualization, and active experimentation (Stokes-Eley, 2007). Individual learning styles and experiences shape the understanding gained from professional development. During experiential learning, the experience of the learner based on personal involvement and discovery becomes a part of the knowledge.

Professional development leaders who engage teachers in experiences to replicate for students need to ensure teachers are able to translate and implement their learning experiences in the classroom. Teachers engage in professional development to learn about actively connect students in the same or similar experiences. Klein and Riordan (2011) indicated teachers actively engaged in ongoing professional development with active experiences are more likely to engage students using the same type of experiences. The ability of teachers to learn from professional development experiences and transfer the knowledge to new situations is experiential learning. Traditional education provides predetermined information without input or influence from learners. Experiential learning provides opportunities to learn from present experiences to relate to future abilities to learn (Hawtry, 2007).

Professional development involving the use of CBI can be designed to provide learners with direct encounters of the strategy. Experiential learning involves an emphasis on the nature of the learners' subjective experience and the understanding they gain from reflecting on the experience (Hawtry, 2007; Hedin, 2010). Teachers who learn about CBI need to ensure they understand how to identify concepts and generalizations in the context of a topic in a specific subject area. Learners gain knowledge of new strategies

during experiential learning when participating in projects and hands-on experiences with a connection to classrooms in schools (Hedin, 2010). Reflection on new learning can lead to development of strategies to handle comparable tasks in a more expertly manner (Groves, Bowd, & Smith, 2010). An experiential learning event includes active participation of learners by experience or by doing and reflection on the implementation of the newly acquired knowledge. Self-assessment of the learning environment is a necessity in experiential learning to develop new knowledge or skills. Experiential learning can enhance the self-confidence and social skills of learners as practical knowledge and skills deepen.

Training programs for adult learners often lack acknowledgement that adults in training groups differ by generations, histories, preferences, and standards making the case for training for diverse adult learners (Holyoke & Larson, 2009). Professional development planners for adult learners must consider the learning styles and preferences of various generations. People in different generations have diverse experiences in personal and educational situation. These differences affect learning styles and motivation. Learning principles in teacher training must be meaningful to the learner for commitment of time and energy. Adult learning can prepare individuals to make meaning or construct knowledge using strategies such as reflection and dialogue to provide the opportunity for learning to occur (Trotter, 2006). Effective professional development is planned with consideration for individuality and other dynamics including age.

Transformative learning is described as using prior interpretation of knowledge to create or revise understanding of personal experience to guide future actions. Meaning making managed by adult learners is a catalyst for change in the transformative process

(Taylor, 2007). In a transformative learning setting, learners build new meaning of experiences. Transformative learning includes the construction and appropriation of new and revised interpretations of understanding (Taylor, 2008). A learner's context and point of reference influences thinking, beliefs, and actions. A paradigm shift can occur when a learner revises a frame of reference in conjunction with reflection on experience (Taylor, 2008). Reflection and communication sometimes lead to a shift in thinking, beliefs, and actions. Experiences provide a frame of reference for a learner to make meaning and reflect on the meaning. Reflection can lead learners to revise meaning and interpretation of knowledge for future actions.

Reflection is a necessary connection to transformative learning. Reflective practice in professional development should be explicit and direct and used to interpret and improve teaching reflective procedures to others (Carrington & Selva, 2010). Engaging in self-reflection is important in transformative learning because reflective discourse helps learners identify and assess assumptions and frames of reference (Lee & Greene, 2003). Through transformative learning, an individual realizes assumptions and interprets them for examination. Teachers make meaning of new learning and determine how to use the knowledge in the classroom. Life experiences influence the development of knowledge. Learners examine, question, and revise predispositions when thinking shifts during professional development with other learners. Time and practice are essential for appropriate and meaningful learner use of reflection.

Communicating through dialogue with peers supports transformative learning in light of new understanding and information for other learners. Taylor (2008) signifies transformative learning is anchored in communication using prior interpretation to

develop a new interpretation for future action. Interaction and conversation with other adult learners can lead to shifts in thinking and the way learners make meaning of information. Group experience fosters learning and transformative growth when assumptions, perspectives, and meaning are challenged by reflection and communication through dialogue (Walton, 2010). Working in groups provides learners access to complex situations for reflection and transformation. Learning about CBI in a group provides learners an opportunity to interact with a variety of learners with the opportunity for an influence for changing the beliefs and opinions of individuals as the group presents challenges to current beliefs and practices through dialogue and reflection.

Complicated diverse learning and individual needs present challenges for professional development planners and trainers (King, 2009). Learners may resist transformative learning or barriers for the implementation of the theory may exist. Planners and educators can identify learners who are more susceptible to or welcome change by considering learner readiness (Taylor, 2008). The study explored the perceptions of individual teachers about the professional development they received to learn and understand CBI. Reflection, experience, self-direction, and communication are key features of learning theories that explain how learners gain knowledge, interpret meaning, and adjust understanding for meaning application of learning.

Zone of proximal development. Zone of proximal development (ZPD) is referred to as the part of instruction when a learner receives help in gaining knowledge of a concept (Powell & Kalina, 2009). Once the student completely understands the original activity, they develop and are capable of expanding their abilities. Effective instruction is intended lessen the independent learning and learning with assistance from a peer

(Espinoza & Winsler, 2005; Shabani, Khatib, & Ebadi, 2010). It is wise to keep learners in their personal ZPD by providing interesting and culturally meaningful learning and problem-solving tasks that are more difficult if attempted as an individual thus prompting working with a competent peer, teacher, or adult to complete the task (Shabani et al., 2010). Optimal situations are different for each learner and possibly in different contexts for the same learner (Shabani et al., 2010). In this study, it was important to understand how the individual teachers learned, understood, and made sense of training to comprehend CBI.

For teachers, the ZPD is the gap between current teaching knowledge of content, pedagogy, and skills and the next prospective stage of knowledge gained because of collaboration with others (Shabani et al., 2010). Teachers interested in professional growth advance their ZPD through professional experiences and well-planned professional development activities. Teacher learning begins with enthusiasm and motivation, which can assist in moving from the current ZPD to a more complex one (Shabani et al., 2010). A teacher lacking the drive to improve teaching practices and abilities will maintain an inactive ZPD. ZPD is enhanced by internal factors such as teacher's knowledge, belief, and self-efficiency or external sources such as the school or community. Specific elements with direct bearing on teachers' ZPD include collaboration with peers and mentors, contextual constraints, behavior and discourse, artifacts and technology, action research and student achievement data, and diary writing (Shabani et al., 2010). After receiving professional development, teachers returned to the classroom with new knowledge they could implement in the classroom. This study investigated the

implementation of CBI across classrooms after various secondary teachers at a school receive training.

In the current study, it was important to understand teachers' perceptions of the professional development they received to learn CBI and how they self-assessed their progress during implementation. Actions and decisions of teachers are often constrained by contextual factors embedded in social, economic, political, or educational policies (Shabani et al., 2010). The content and pedagogical knowledge of teachers based on prior knowledge and cognitive and thinking skills and beliefs serve as dependable resources for creating personal philosophies (Shabani et al., 2010). Teacher learning is also sparked by the use of interventions during training such as technology, handouts, worksheets, video, and classroom design to name a few (Shabani et al., 2010). Current knowledge in research-based teaching strategies and practices to develop professionally specifically through self-exploration and self-improvement are important for all teachers (Shabani et al., 2010). The focus of reform is improving instruction and student learning. As a result, there is an emphasis on teacher preparation, high-quality teaching, and teacher learning. The current study examined the influence of professional development on classroom instruction. Teachers in the study shared their perceptions of the adequacy of professional development they received in CBI in relation to their confidence during implementation. The study was concerned with teacher reflection on the use of CBI in secondary classrooms after receiving professional development.

Professional Development

Since schools experience a hasty rate of change, professional development for teachers is usually more individualistic, decontextualized, and passive learning without

teacher reflection on experiences, exercise of creativity, or use of experiences that can apply instantaneously in the classroom (Hardy, 2010). Professional development with passive teacher involvement remains the foremost method for teacher learning. Multiple professional development goals are necessary to overcome the challenges to instructional change. Professional development can be designed to embed professional learning for teachers on a daily basis (Loucks-Horsley et al., 2003). Professional development can be offered in various effective forms including traditional workshops or more innovative reform-based activities (Birman, Desimone, Porter, & Garet, 2000). Professional growth in teachers is created when teachers attend classes led by exemplary teachers and coaches to observe their teaching methods, strategies, and techniques (Shabani et al., 2010). Factors such as duration, content, active learning, and consistency influence the successful achievement of the professional development.

The duration of professional development for teachers to learn new information is often set for one week or less. Critics of one week or less for professional development have argued the duration is too short and planners often fail to include follow up during the implementation phase. Training designed for reform is difficult for teachers. Reform places challenging demands on teachers and requires teachers to make major adjustments to put the reform into practice (Penuel, Fishman, Yamaguchi, & Gallagher, 2007). Traditional professional development neglects to inspire teachers to make and sustain meaningful changes. Professional development of longer duration with a design inclusive of interactivity provides opportunities for teachers to incorporate new learning into current practice (Penuel et al., 2007). Teachers make a minimal effort to change, or they refuse to make change happen after receiving training when the design of professional

development excludes learning opportunities for presentation, integration, and reflection of knowledge. Interactive professional development is more likely to provide learning experiences teachers can combine in their existing system of instruction and teaching.

Customary professional development design builds upon mastery and perfecting teaching methods. Teachers desire to improve practice and provide optimal learning conditions for students but these efforts diminish when professional development design only supports mastery of predetermined methods. Teachers worry more about mastering and refining teaching methods rather than cultivating thinking processes to understand theory needed to maintain true reform in education (Nasser & Shabti, 2009). True reform can occur when teachers are motivated to learn a new reform and use it in the classroom. Teacher involvement in planning professional development and buy-in for the value of the professional development are critical when planning training. Reform efforts influence teacher practice in the classroom when they are valued and placed in the context of real classroom situations. Teachers and professional development planners are able to identify instructional challenges that require teachers to receive additional training.

Actively engaging professional development is highly effective and allows teachers to extend understanding of content and strategies accessible through professional development (Richards & Skolits, 2009). Teacher understanding during and after professional development influences the use of knowledge gained from the training. Teacher training with hands-on experiences and authentic contexts connected to new strategies are effective. Meaningful professional development provides modeling of new strategies and interaction in groups to apply, analyze, and synthesize instruction strategies

in meaningful ways to the individuals (Birman et al, 2000). In order for teachers to actualize training in the classroom, contextual meaning is a necessary component of the training and understanding is a crucial outcome. School districts can change the nature of professional development by providing meaningful and engaging programs respectful of the intelligence and good will of teachers (Nieto, 2009).

Teacher motivation influences participation in professional development. Consideration for teacher motivation is critical when designing professional development for teacher change and innovation. Sustaining motivation proves to be possible when teacher motivation is considered at the onset of planning professional development (McDonald, 2009). Transformation of practice occurs when teachers immerse in content and pedagogy for an extended amount of time with a plan for support, application, reflection, and collaboration among peers (Klein & Riordan, 2011). The purpose of professional development is teacher change and innovation and it is important to connect teacher motivation in the context of professional development (McDonald, 2009). Teachers apply learning in the classroom at varying degrees after receiving professional development depending on the motivation to use knowledge gained during training.

Teachers experience formal, structured seminars offered on in-service days and informal hallway discussions with other teachers among other ways to increase knowledge and skills to improve teaching and personal, social, and emotional growth (Desimone, 2011). Workshops, conferences, college courses, and special institutes are examples of professional development activities with potential to improve teaching practice, especially if the learning is interactive and social, based in conversation and practice. Professional development never stops and it is a part of teachers' daily lives

(Desimone, 2011). This study explored teacher understanding during professional development as well as teacher confidence in implementation and support provided after professional development. Individual learning styles, self- motivation, reception to change and innovation, and the identified needs of teachers influence the design of professional development. An ongoing, reflective, iterative professional development program provides support for teacher understanding and implementation over time.

As a means to assess the effectiveness of professional development programs, it is important to measure common features shown by research to relate outcomes of concern. Practice-based, extensive, and embedded learning opportunities make a difference for teachers and the way they teach (Talbert, 2002). The current study considered teacher understanding and implementation of CBI through the examination of classroom artifacts. Teacher understanding and development of meaning influences the implementation of the learned instructional strategy in this study, CBI. The exploration of sensemaking was vital in gaining insight into teacher learning and the creation of meaning for secondary teachers in the study.

Sensemaking

Schools provide professional development to increase teacher knowledge. Typically, teachers who receive the training are expected to realize the impact and new knowledge to their teaching. The study utilized sensemaking theory to understand what happened after teachers received professional development about CBI. Sensemaking is the language, talk, and communication used to determine the existence of an organization (Weick, Sutcliffe, & Obstfeld, 2005). Sensemaking helps learners interpret and implement according to understanding. This study sought to appreciate how secondary

teachers made sense of professional development in CBI and how they used the knowledge in the classroom.

According to Weick et al. (2005), the sensemaking process is continuous, instrumental, understated, swift, social, and clearly taken for granted. Individuals engage in sensemaking by extracting cues to decide what is important and acceptable to find significance in an experience. In an organization such as a school, coordinated behavior occurs through a sensemaking process involving a cue, a frame, and a connection. Making sense involves supplementary behavior to connect the frame to the cue for clarity to others (Salem, 2007). Sensemaking provides transparency of how individuals construct meaning about their environment. In this study, sensemaking was used to gain awareness of the development of teacher understanding of CBI and how other factors and the teachers' understanding influenced teacher learning and implementation.

Sensemaking is necessary in an organization when written and categorized situations exist and the organization is able to conduct itself through reading, writing, conversing, and editing (Weick et al., 2005). Within an organization, a team manages and coordinates efforts to explain present circumstances, and plan for future circumstances through sensemaking to obtain collective understanding of the situation in order to clarify or make the right decision apparent (Klein, Wiggins, & Dominguez, 2010). Sensemaking occurs when people organize their actions by equivalent meanings, dispersed meaning, overlapping views of indistinct events, or undisclosed familiarity (Salem, 2007). In sensemaking, the experience of group action is common rather than mutual meaning.

The way the members of an organization think about, discuss, and describe communication within the organization characterizes the truth of the organization. "In an

organization, sensemaking comes from either small subtle, relational, oral, particular, or momentary factors as well as from conspicuous, large, substantive, written, general, and sustained factors" (Weick et al., 2005, p. 410). The current study explored how secondary teachers talk about their organizations, how they construct meaning in and about the organization, and to investigate the function of CBI in building the school's identity. The secondary teachers selected for this study received professional development in the use of CBI. The study investigated the support the secondary teachers received during implementation of CBI, and the consistency of implementation across classroom at the same school.

In a school, educators assume the beliefs, actions, and behaviors of the individual teachers collectively determine the organization. A strategy such as CBI receives consideration for adoption by individual teachers when the strategy successfully enters the organization. When people can agree to the nature of experience and determine substantial events from marginal ones, experience makes sense (Salem, 2007). Individuals act and make sense of their actions to transition from an external idea to an action implemented in the organization so members of the organization understand, share, and take action about the idea within the organization.

Sensemaking is key for individuals to construct meanings and make sense of circumstances so that change outcomes align with anticipated outcomes for the organization (Hope, 2010; Okada, Connolly, & Lane, 2010). The interpretations of the individuals who will implement the change determines change outcome when the individuals in the organization exchange information, discuss, gossip, joke, and have conversations to construct an interpretation of how to put change into action (Hope,

2010). Understanding the conditions for implementation is dependent upon the values of leaders and the actions of individuals. School leaders who are engaged as instructional leaders offer more professional development with potential to promote effective instruction (O'Day & Quick, 2009). Secondary teachers in the study received professional development in CBI and were expected to implement the strategy in the classroom. Actions of individual members in an organization influence beliefs and actions of others in the organization. The status of the implementation of CBI by individual teachers had the potential to influence the beliefs of others in the school about the benefits of CBI. Sensemaking provides guidance to examine the implementation of CBI in schools based on teacher learning and factors impacting the construction of meaning for the transfer of new knowledge to classroom practice.

Training Transfer

Schools and districts rely on training to impact instructional practices of teachers. The target of training programs is for large amounts of transference to occur (Westover, 2009). Teachers participate in professional development to gain knowledge of different instructional strategies. Trainers present information and strategies during professional development for implementation in the classroom. The degree of implementation among teachers who receive the same training varies. Reports indicate only 10% of what is learned in training is applied on the job (Saks & Belcourt, 2006). When teachers fail to transfer knowledge gained during professional development to classroom teaching and learning, it presents a problem for educational organization due to accountability. Training new strategies is effective when connected to the work of the participants. It is crucial for organizations to embed strategies to improve the transfer of training in

professional development (Saks & Belcourt, 2006). Training provided in context of actual situations provides teachers with an idea of how to use the new knowledge in the classroom.

Workplace learning is the act of gaining, using, and reflecting knowledge to achieve organizational goals (Hutchens, Burke, & Berthlesen, 2010). Aligning professional development with organizational goals is necessary for successful outcomes. Organizational needs and the needs of individual teachers provide a basis for the substance of a professional development plan. Once professional development has occurred, teachers need motivation to use and sustain new practices in the classroom. Transference is the capacity of an individual to use information and skills acquired during training in a new environment (Westover, 2009). Positive transference happens when trainees implement procedures and techniques learned in training while negative transference occurs when individuals fail to implement practices provided in training.

Practicing new skills is important for retaining knowledge. Placing practice opportunities directly after learning a concept or skill enables better recollection of the skill (Westover 2009). Support from instructional leaders and peers is important in promoting the use and sustainability of new strategies. Some training professionals learn about instructional design through a train-the-trainer session and then take the responsibility for sharing the knowledge with others in the organization (Hutchens et al., 2010). Designing a plan to share a new skill is important in relaying the context of the training to other organizational members for use. Training transfer is the application, generalizability, and maintenance of new knowledge and skills (Cheng & Hampson, 2008). If only a few members of the learning organization receive professional

development on a new skill, the trained members are responsible to help others understand the skill, acknowledge the importance of the skill within the organization, implement the skill consistently across the organization.

Supervisor support is a necessity in the facilitation of training transfer. Educators identify insufficient time and support and lack of accountability as underlying causes of the lack of transfer support (Hutchens et al., 2012). Successful transfer occurs when instructional leaders monitor implementation of new strategies and provide feedback to teachers. Saks and Belcourt (2006) recommended supervisor involvement before professional development occurs and a method to hold participants accountable upon the conclusion of training. A monitoring plan allows supervisors to observe and follow up with teachers during the application of new instructional strategies. Pre-training activities involving the supervisor and participants can potentially improve transfer of training. Post-training support is necessary to practice and apply recently acquired skills in the classroom. A missing link in training transfer may be the trainers' knowledge of research-based transfer practices, which would influence their ability to help a learner implement new knowledge in the workplace (Hutchens et al., 2010).

After training occurs and leaders provide support to transfer knowledge to practice, the trainee makes the decision to apply the knowledge and skills in practice (Cheng & Hampson, 2008). Secondary teachers in this study considered their perceptions of support provided by instructional leaders. Instructional leaders influence implementation when they provide consistent support during the use of concept-based. Differentiated support may be necessary for teachers with varying knowledge, skills, and motivation.

In an age of accountability, schools and districts find it necessary to review data when making decisions about teacher implementation of new skills. A method to examine new policies, programs, or strategies is to concentrate on the extent and ways they are implemented and the results connected with each one (O'Day & Quick, 2009). In the study, secondary teachers shared their insight about the sufficiency of professional development offered for training in CBI and a reflection of their development in implementation. Support from instructional leaders inspired whether or not teachers continuously used CBI in the classroom. Secondary teachers in this study communicated their thoughts concerning the support for implementing the strategy, CBI, in the classroom to provide a perception of reinforcements and barriers influencing their use of the strategy.

It is necessary to investigate processes that promote and constrain teachers' internalization of new instructional strategies and ways to enhance professional development to promote sustained instructional improvement (Richards & Skolits, 2009). Teachers are responsible for implementing new knowledge and skills in the classroom setting. Transferring knowledge from a learning setting to implementation is enhanced when teachers understand the underlying theory and research supporting the learning. Teacher accountability is critical for student learning to occur (Ballard & Bates, 2008). Improving teachers' knowledge of instructional strategies and methods promotes consideration of the value of using them when teaching in the classroom. Implementing and using research-based instructional strategies enriches learning for all students through engaging partnerships among teachers and students (Boudah et al., 2003). Quality implementation involves opportunities for teachers to observe model lessons, gain from

job-embedded support, and hear high-quality feedback (Knight, 2009). Teachers implement knowledge and skills acquired during training through instructional methods in the classroom. Support and feedback from peers and instructional leaders can assist in adjusting the use of knowledge as needed for implementation efforts to improve teaching and learning.

Teachers and colleagues who experience professional development together interact and motivate each other during implementation. Shared participation supports more successful implementation because reforms have more influence when accepted by peers (Penuel et al., 2007). Collaboration and peer involvement in professional development and support after training influence instructional reform. Peers provide support for colleagues through learning communities within the school, meetings with a focus on instruction, and peer observation. Sharing successes and challenges with peers who are experiencing the same reform provides support for teachers. Transfer of learning relies on the replication of prior learning, new learning, and new situations (McDonald, 2009). Learning from professional development is transferred when there is a connection between previous knowledge and new conditions. The consistency of the use of CBI by secondary teachers in the study was considered to gain more insight into teacher learning and sensemaking and how teacher learning was reflected in the classroom.

Implementation of CBI

Traditional teaching methods are not effective in helping students use prior knowledge in examples similar to everyday situations they experience (Cakici & Yavus, 2010). Some current educational models and pedagogical strategies implemented in U.S. classrooms lack a positive influence on diverse populations of students with varied

learning needs. CBI provides students a connection with past knowledge and discipline knowledge in a conceptual structure to minimize unrelated details (Twyman et al., 2006). A common practice in CBI involves teachers selecting concepts and planning instruction that allows students to access prior knowledge. Teachers who are unfamiliar with CBI require effective professional development to understand the strategy. Secondary teachers in the study received research-based professional development in CBI and content unit planning. During the training, teachers developed concept-based units in with outlined concepts, generalizations or essential understandings, guiding questions, lesson plans, learning experiences, and performance-based assessments. After the professional development, trainers presumed the secondary teachers were prepared to use CBI in the classroom.

A highlight of CBI is using a conceptual lens for a student to view content in a specific subject at a deeper level with the combination of content and facts (Schill & Howell, 2011). The implementation of CBI permits teachers to move from focusing on isolated facts for memorization and recall to organizing learning in ways to engage students by using concepts and generalizations (Al-Qatawneh, 2009; Birbili, 2007). Conceptual understanding becomes more highly developed as new examples of concepts emerge (Erickson, 2008). It is the responsibility of the teacher to identify concepts in planning instruction (McCoy & Ketterlin-Geller, 2004). In order for students to gain deep conceptual knowledge, teachers need an understanding of how to teach conceptually, provide concept-based learning experiences, and how to assess for conceptual understanding.

Implementing CBI provides teachers a strategy to develop the fullest potential for all students to understand and learn rather than using traditional methods or a variety of hit or miss strategies. Rittle-Johnson and Koedinger (2009) indicated the knowledge of concepts and procedures is important with an early emphasis on the development of concepts. Teachers develop concepts in lesson plans to use during instruction for relevance and connections for students. Teachers involved in the study will share their perceptions of the quality of learning during training and the influence of learning CBI on their instruction. The current study determined how secondary teachers felt about the adequacy of professional development they experienced to prepare to teach using CBI.

For this study, teachers self-assessed their implementation of CBI by considering what occurred in the classroom with students. During the learning process, it is fitting for teachers and students to connect facts to concepts. Dedicated teachers can motivate students to absorb concepts and master skills (Al-Qatawneh, 2009). Teaching concepts in depth to all students requires proficiency in the content area, an understanding of how students learn, and having a wide range of instructional strategies to promote student learning (Loucks-Horsley et al., 2003). The study investigated if training secondary teachers to develop and use concept-based units influenced confidence in implementation, growth in understanding, and common understanding among trained teachers. Secondary teachers who implemented CBI provided their perception of the support or lack of support from instructional leaders as an indication of influential factors on implementation.

Influential Factors

According to Trotter (2006), key factors for successful adult learning include the use of contextual experiences, continuous support and advisement, encouragement to assume new roles, and the use of support and feedback during implementation. Teachers assume the responsibility for implementing new instructional strategies after receiving professional development. Teachers with the opportunity to promote reform through professional development opportunities have the chance to make changes (Bruce & Ross, 2008). Support from leadership and other teachers can influence the success a teacher experiences with the implementation of a strategy such as CBI. Embedding new strategies within existing situations during training reinforces the value of the strategy.

Teachers have prior knowledge and make sense of training based on existing knowledge, new knowledge, experience and beliefs. Teachers learn from everyday actions and experiences (Tee Ng & Tan, 2009). A teacher is responsible for implementing new strategies in the classroom after receiving training. The study investigated the implementation of CBI by individual secondary teachers. The study also explored how teachers developed knowledge about CBI and how they continued learning about the strategy while they used it. Teachers in this study considered the support they received from leaders and peers and how the support influenced their use of CBI.

Individual teachers are accountable for implementing new practices and strategies in their classrooms, but they need a support system from instructional leaders and other teachers. Professional development actively involving teachers prepares them more successfully for implementing the strategy but teachers need support to sustain using the strategy. Scheeler (2008) indicated teacher training alone might not be sufficient to

sustain program implementation over time. The exploration of the implementation of CBI in secondary classrooms was the focus of this study to gain insight into how teachers obtained knowledge about CBI, how they received support during implementation within the school, and how leaders provided support for CBI. Implementation of new strategies have been found to deteriorate after four days of implementing the program with less than 30% of what was practiced in the training for teachers actually transferred to the classroom (Scheeler, 2008). The study reviewed the contribution of the individual teacher in the construction of meaning about CBI within the classroom and offered a view into support or lack of support during the implementation of CBI.

Individual teachers interpret and construct meaning from training using assumptions and knowledge used in current practice. The relationship between action and interpretation is sensemaking (Weick et al., 2005). Sensemaking helps teachers determine reality and meaningful ways to use knowledge gained from training in context with students. Teachers use sensemaking to appoint disperse meaning to new knowledge as it relates to prior knowledge based on current understanding by the teacher (Tee Ng & Tan, 2009). The consistency of the implementation of a new strategy across classrooms deserves consideration to envision the sensemaking and understanding of teachers within the organization. Teachers use meaning from professional development to present new strategies in the classroom for improvement (Weick et al., 2005). The current study benefitted from understanding the implementation practices of all secondary teachers trained to use CBI within specific secondary schools in North Carolina. Implementation occurs in individual classroom after professional development. The type of training influences the use of new strategies in addition to the experiences and beliefs of the

teacher using the instructional strategy in the classroom. Within an organization, shared goals, collaboration, a focus on student learning, brings teachers within a school together for common learning to make change in instructional practice. For this study, the exploration of CBI in secondary schools was useful in understanding the conditions, influences, and consistency of implementation across classrooms within a school and throughout the state of North Carolina.

A review of support from instructional leaders for teachers who were implementing CBI who received professional development occurred in the study. Individuals recognized as leaders, especially in the area of instruction, who influenced teacher implementation or provided support for the implementation of CBI, were considered in the study. School leaders influence behaviors and beliefs of classroom teachers. Effective leaders understand the strengths and challenges of teachers as well as provide teachers with the purpose and perspective of professional development related to school goals and individual growth and development. Teachers are ultimately responsible for making true reform or causing shifts in classrooms but leaders are critical in acknowledging the need for change and verifying when change occurs. Organization change occurs through learning and altering functions although most established cultures are resistant to planned initiatives (Salem, 2008). Teachers who attempt new ideas and work through the challenges of implementation, are more likely to maintain new methods, experience success, and incorporate improvements into practice (Bruce & Ross, 2008). The teachers in the study reflected on the influence of instructional leaders on teacher learning, sensemaking, and the implementation of CBI.

Instructional leaders within each school used in the study may have responsibility for helping teachers implement CBI or for providing support for teachers during implementation. The study examined the perceptions of the teachers about the support provided by the instructional leaders during the use of CBI in the classroom. Individual teachers shared their view of whether or not instructional leaders provided differentiated support to address the various levels of implementation of teachers. Teachers in the study also indicated the involvement of instructional leaders in removing barriers that restricted the successful implementation of CBI. Aligning and implementing curriculum, collaborative structures, examining teaching and learning, immersion experiences, practicing teaching, and vehicles and mechanisms are categories used to describe and outline learning strategies for teachers (Loucks-Horsley et al., 2003). Teachers participating in the study provided insight into their understanding and implementation of CBI in their middle school classrooms and revealed factors influencing implementation. The study sought to understand the influence of leaders on learning, sensemaking, and the implementation of a strategy such as CBI.

Chapter Conclusion

The literature review consisted of research about the history and foundations for understanding the need for instructional improvement in U.S. classrooms. Professional development for teachers to learn about CBI and the implementation of CBI as an instructional strategy were the focal points in Chapter 2. Studying topics and facts fails to engage students in deeper thinking, but students find personal meaning and become more motivated to learn when teachers help them connect facts to conceptual significance (Erickson, 2008). CBI is a strategy teachers learn and use to teach students concepts and

generalizations for meaningful understanding of content. Educators who lack an understanding of CBI benefit from professional development designed to fill the gap. Teachers need professional development planned to help them understand CBI. Wasmann-Frahm (2009) indicated conceptual change lies deeply anchored within an individual but further research is necessary. Teaching for conceptual learning in a classroom requires a teacher who understands and makes senses of the strategy, CBI.

The examination of research revealed a gap in knowledge pertaining to professional development designed to train all teachers to use CBI and the actual implementation of the strategy in secondary classrooms. Klein and Riordan (2009) reported there is little research about how teachers implement effective professional development into curriculum and instruction and how organizations use professional development to implement their vision while developing new knowledge about instruction and learning. The investigation of literature revealed general beliefs about the benefits of CBI or support for the use of the strategy with specific groups, students with disabilities, or in a limited number of areas including reading, language, and science. Some concept-based studies involving students with learning disabilities in inclusive situations have shown an increase in student comprehension and problem solving skills (Twyman & Tindal, 2005). However, minimal research about professional development designed around concept-based followed by the investigation of the implementation of CBI was found.

Teachers face the challenge of meeting the educational needs of the diverse students in classrooms (Hebblethwaite, 2010). National concerns as well as historical events have generated anxiety about the quality of teaching and learning in current U.S.

classrooms. Recent reauthorizations of ESEA, including *NCLB*, focus significant attention on teacher quality and professional development (Islas, 2010). The key to success for schools seeking education reform is how well the teachers learn and implement a design after schools or organizations provide adequate professional development (Klein & Riordan, 2009). Teachers' perceptions of professional development related to implementing CBI provided insight about challenges and support to improve classroom practice.

Chapter Summary

Meeting the needs of all students requires educators to move away from the limitations imposed by state standards, textbooks, and standardized resources (Rockwell, 2007). Educators enhance their abilities through professional development designed to provide training to improve instruction and promote innovation in the classroom. CBI consists of supporting ideas with the potential of improving instruction and learning. (Cammarata, 2009; Erickson, 2007; Ganem-Gutiérrez, & Harun, 2011). Educators make meaning of new instructional methods to implement them with students. Knowledge gained during professional development is transferred into context in learning situations.

Since accountability is prevalent in education, teachers are responsible for planning effective instruction effective for all students (Ostermeier, Prenzel, & Duit, 2010). Transformations required by reform efforts involve change in classroom practices, which ultimately depend on teachers (Borko, 2004). Professional development that empowers teachers is critical for teachers to gain knowledge about improving learning opportunities for all learners. Chapter 3 includes a description of the methodology chosen to collect data to understand the perceptions of secondary teachers receiving professional

development in CBI and the implementation of the strategy in the classroom. The chapter includes a discussion of the method and design appropriateness, population, sample, data collection and analysis. Details about the instrumentation, reliability, and validity of the study are in the chapter.

Chapter 3

Research Method

The purpose of the hermeneutic qualitative phenomenological study was to identify teachers' perceptions and lived experiences of implementing the instructional method of teaching identified as CBI. Qualitative researchers attempt to understand how people explain their experiences and the meaning they assign to experiences (Merriam, 2009) as the truth is being revealed from within the self (Heidegger, 1999). After the *NCLB* Act became law, educational entities including school districts hurried to provide courses and professional development opportunities for teachers to become highly qualified to meet the requirement. Implementation of professional development varies from shallow to significant, which may include teachers' misconceptions (Klein & Riordan, 2009). Schools and districts provide professional development for teachers to learn or improve the use of instructional strategies. The supports and challenges affecting how teachers learn about and implement CBI were explored in the study.

The study specifically investigated the perceptions and lived experiences of eight secondary education teachers in North Carolina public schools to understand the existing conditions existed for teachers to learn about, constructing meaning, and successfully implementing CBI. The importance of the study, a theoretical basis, and relevant research literature were the areas of concentration in Chapters 1 and 2. Chapter 3 details the research method, the research design, and the appropriateness of the research design. The chapter includes a discussion of the appropriateness of the qualitative method and a phenomenological design. The population, sampling, data collection procedures, rationale, validity, and data analysis process are included in the discussion.

Research Method

Qualitative research was employed to understand how participants used their experiences to construct meaning (Graebner, Martin, & Roundy, 2012; Merriam, 2009). A qualitative study incorporates exploration and interpretation of participants' experiences in a subjective manner to understand and explain phenomena (Salehi & Golafshani, 2010). The purpose of this study was to understand the existing situations for secondary education teachers in North Carolina public schools to comprehend and successfully implement CBI. Quantitative research depends upon the use of numerical data for statistical analysis to determine relationships while qualitative research is widely known for using non-numerical data to investigate the behavior of participants from the participants' point of view (Gelo et al., 2008). Results from a quantitative study are usually specific numbers analyzed statistically for frequencies of information trends to describe tendencies of larger groups of people (Creswell, 2012). A qualitative method was used as an approach to reveal participants' experiences and perceptions of circumstances involved in the implementation of CBI.

Teachers provide instruction in classrooms and are responsible for implementing research-based instructional methods after receiving professional development on the method. This study used the lived experiences and perceptions of participants to understand how participants perceived the adequacy of the professional development in preparing them to implement CBI with confidence in their classrooms. Qualitative research includes meanings based on the experiences of the participants in the study (Yilmaz & Altinkurt, 2011). Participants' experiences in the classroom during the implementation of CBI was used to understand the meaning they assigned to the

professional development and how prepared they felt when applying the knowledge they gained. The information collected was subjective and depended on participants' beliefs, feelings, and attitudes. A qualitative method is suitable for a study when researchers are interested in how people translate their experiences and assemble meaning in life based on these experiences (Merriam, 2009). The study attempted to understand the phenomena of implementing CBI as it was lived by the participants to yield themes and descriptions formed by the participants and the researcher's reflexivity.

A mixed methods design involves collecting and analyzing information using both qualitative and quantitative research methods. Challenges of a mixed method design include limitations of time and resources for a lengthy data collection process and the ability of researcher to collect data from a specific sample (Bak, 2011). Various reasons to use mixed methods include to gain a better understanding of the problem, to adequately address the research problem or the research questions when one method is unsuccessful, to provide a different perspective, or for studies in programs where quantitative research is the norm and qualitative research is not accepted (Creswell, 2012). Quantitative research assumes social facts as a separate reality from individuals' beliefs while qualitative research is built on individual definition or understanding of a situation (Firestone, 1987). The study sought perspectives about the phenomenon of interest rather than uncovering facts. Secondary teachers' perspectives about CBI provided information about the implementation of the strategy rather than exploring existing facts about the use of the method. A qualitative study is concerned about individual interpretation of experience, construction of the individual's world, and

meaning assigned to experience (Merriam, 2009). A qualitative study is set to understand the sense-making individuals use to explain their lives and experiences.

Research Design

The hermeneutic phenomenological research method was used to understand the experience of implementing CBI. Semi-structured interview questions were used to collect details about teacher training experiences in CBI and their implementation of the instructional strategy in the classroom. Detailed interviews enable the extraction of stories, reflections, and feelings about the identified phenomenon (Smith, Flowers, & Larkin, 2009). During a semi-structured interview, the researcher is able to use flexibility when responding to the situation, emerging views, or new ideas indicated by the interviewee. Participants articulated their experiences in training, implementation practices, and self-assessment of their progress with implementing CBI.

Phenomenology. Phenomenology occurs within an individual (Østergaard, Dahlin, & Hugo, 2008) because the truth of a being is inside an individual (Heidegger, 1999). Individuals use understanding and explanation of reasons or motives to account for perspective and personal circumstances to make sense of life (Pérez-Ávarez & Sass, 2008). Human beings construct meaning as they participate in the world. The study was a search for meaning of participants' experiences in learning about and using CBI. Phenomenology highlights experiential, practical, and instinctive understanding as more meaningful than abstract, theoretical knowledge (Standing, 2009). The study aimed to explore participants' experience of the implementation of CBI in the classroom after participating in professional development about the strategy.

Phenomenology seeks real meaning and understanding of a phenomenon as experienced by participants (Merriam, 2009, p. 23). Interviewing allowed the participants to tell their personal stories by communicating life experience. The goal of phenomenology is to gain reflexive and reflective meaning by description of the essence of the phenomenon transformed from lived experience (McMillan & Schumacher, 2006). Phenomenological research was the best design to explore the meaning of events and interactions associated with understanding and using CBI.

Hermeneutic Phenomenology. Phenomenology provides a regular approach to phenomena as lived experiences while hermeneutics embodies interpretation. Hermeneutic phenomenology represents the merging of two complimentary methodologies to promote interpretive functions (Robertson-Malt, 1999). Hermeneutic phenomenology proposes methodological approaches for investigating and comprehending lived experiences (Strong, Pyle, deVries, Johnson, & Foskett, 2008). The hermeneutic phenomenological approach is appropriate for the purpose and problem of the study as the approach supports the investigation and interpretation of occurrence in life.

Hermeneutic research exemplifies reflexivity, dialogue, and interpretation (McCaffrey, Raffin-Bouchal, & Moules, 2012). Study participants engaged in reflecting on personal encounters and considering experiences with CBI while responding to interview questions. The concepts and principles of hermeneutic phenomenology allow for individuals to access, interpret, and communicate experiences (Standing, 2009). Self-positioning transpires in the work of hermeneutic research (McCaffrey et al., 2012). Interpretation encompasses a *hermeneutical circle* as an analysis of part-whole

associations used to understand the whole through reading the parts (Carnevale, 2013). The transcription of interview responses lead to the review and interpretation of data in an iterative process. The transcript of the interview of an individual participant was analyzed holistically and in-depth by parts to understand how professional development, understanding and support influenced the implementation of CBI. The analysis of the part displays an integral relationship to the whole, entire interview (Smith et al., 2009). The *hermeneutical circle* anticipates iterative questioning and shifting of ideas. The hermeneutical phenomenology method was appropriate for the study because self-understanding as well as meaning in relation to others are influenced by "how things have come to be regarded in a particular manner" (Carnevale, 2013, p. 87). Hermeneutical phenomenology offers an approach for analyzing and making sense of lived experiences (Strong et al., 2008).

Design Appropriateness

There are various types of qualitative research designs including case study, ethnography, grounded theory, and hermeneutic phenomenology. The case study method involves a focus on an individual, community, or institution to expose the evident interaction of features unique to the individual, community or institution (Berg, 2009). Case study was not the most appropriate design for this study because the researcher was interested in investigating perceptions and experiences as a method of understanding meaning associated with CBI by participants. The objective of a case study is to thoroughly examine one setting, subject, or event over time to describe and explain a phenomenon (Berg, 2009). Case study is in contrast to the purpose of the current study, to

gain perception of the meaning of a phenomenon using themes generated from the subjective insight and experiences of participants.

Ethnography is a useful study when the researcher is interested in a cultural or social group with a focus on relationships among actions, language, beliefs, rituals, and ways of life (McMillan & Schumacher, 2006). The study design provided a basis to investigate experiences and perceptions of each participant while ethnography is used to describe the culture of groups. Grounded theory is used to produce a theory established around data to provide an explanation for a situation generated by a process. Perception unlocks the meaning of things (Merleau-Ponty, 1966). The researcher sought to explore secondary teacher perceptions of CBI through hermeneutic phenomenology. The intent of phenomenology is to establish the meaning of an experience for people who have had the experience and are able to describe it (Moustakas, 1994). A phenomenological approach is well suited to study affective, emotional, and often intense human experiences (Merriam, 2009). In the current study, hermeneutic phenomenology was used to explore the meaning secondary education teachers assign to their experiences when they implement CBI.

The study generated information concerning the adequacy of professional development, support from instructional leaders, and consistency of implementation across classrooms. Findings surface among the interactions between the researcher and participants in a qualitative study with value laden questions and findings (Ajjawi & Higgs, 2007). The researcher using hermeneutic phenomenology follows the epoché process by setting aside presumptions about the phenomenon under exploration (Husserl, 1950/1973; Moustakas, 1994). Reflexive bracketing allows the researcher to suspend

previous understandings and the *hermeneutical* circle provides reflexivity through repeated questioning and changing assumptions (McCaffrey et al., 2012). Practical knowledge is entrenched in everyday life and human relationships. It is appropriate to use phenomenology to investigate lived experiences, personal journeys, pre-reflective experiences and feelings (Ajjawi & Higgs, 2007). Hermeneutical interpretation clarifies meaning (Carnevale, 2013). Meaningful information can be obtained by understanding viewpoints of individuals who reflect on their experiences and relationships in everyday life.

Research Questions

The following research question guided the study: *What is the impact of professional development on teacher implementation of CBI in the classroom?* The eight secondary education teachers in the study provided insight into their perceptions of training and their implementation of CBI. Semi-structured interview questions were piloted before use in the study. The questions guided the study to obtain information in response to the central question as well as underlying questions. The underlying questions supported the central question and guided the study of the phenomenon. The supporting questions directing the study were as follows:

1. How do secondary teachers perceive the adequacy of professional development they received in CBI as it relates to their confidence in implementing the strategy with fidelity?
2. How do secondary teachers self-assess their progress of implementing CBI?
3. What are the perceptions of the consistency in implementing CBI across secondary classrooms and of how instructional leaders are providing differentiated support?

4. What supports and barriers are influencing the implementation of CBI?

Open-ended interview questions were used to gather details of participants' experiences. The central research question and supporting questions influenced the interviews. Improvised questions also produced unanticipated subjects and perceptiveness to expand the inquiry (Saldaña, 2011). The interview questions (see Appendix A) explored the concept-based phenomenon in a thorough way. Participants were able to speak without reservation due to the open-ended design of the interview questions. Interview responses were transcribed to obtain the rich data provided through the perspectives, feelings, opinions, values, attitudes, and beliefs about the personal experiences of the participants in the social world.

The researcher asked participants to submit documents or artifacts (see Appendix B) to show the use of concept-base instruction in classrooms and documented the support of school leadership for using the method. Artifacts demonstrated the experience, knowledge, actions, and values of people (McMillan & Schumacher, 2006). Documents provided an understanding of priorities and how resources and supports were allocated within an organization. Physical traces such as documents can be measured by obtaining information on the prevalence and frequency of behavior (Merriam, 2009). Although participants were asked to submit artifacts such as lesson plans, CBI implementation plans, teacher evaluation tools, classroom assessment plans, school improvement plans, and agendas from professional learning community meetings, faculty meetings, department meetings, and professional training to provide further evidence of their implementation of CBI, none were submitted. Documents are a good resource to corroborate results from interviews because their contents reflect and represent their

authors' ideas and value systems (Merriam, 2009; Saldaña, 2011). The researcher planned to review and record information from submitted documents with information about the supports and resources given to teachers in learning, understanding, and implementing CBI. Documents are a good source of data because they are easy to access, free, and contain information harder to find in typical circumstances (Merriam, 2009). The review of documents was intended to be a part of the research process to determine categories similar to the use of the data from the interviews but none of the participants submitted supporting documents for review.

Population and Sampling

The teacher has been the target of numerous education reforms over the past two decades (Scher & O'Reilly, 2009). Studies confirm in-service teacher professional development is more effective when sustained, collaborative, focused on content and instruction in perspective, and enlightened by research (Holmes, Signer, & MacLeod, 2010). Although teachers receive training for instruction in college courses, it is not typical for them to maintain the skills and techniques they learn over time and most teachers are unsuccessful in shifting the learning to classrooms with students (Scheeler, 2008). Expected outcomes of professional development reform are changes in teacher subject matter knowledge, pedagogical knowledge, and attitudes and beliefs (Scher & O'Reilly, 2009). Understanding teacher perspectives of implementing CBI could benefit teachers and educators who plan and support professional development for improved instruction.

In North Carolina, a number of secondary teachers had prior training and implementation experience in CBI. Using these teachers was a resourceful way for the

researcher to connect to educators within the state for the purpose of the current research study. Secondary social studies teachers across the state of North Carolina received face-to-face and virtual training in CBI. Social studies consultants at the North Carolina Department of Public Instruction provided the training to help teachers develop units of instruction aligned with the state standards. After the face-to-face training, teachers met with the consultants multiple times through web conferencing to learn how to use technology to enhance the implementation of CBI using units they developed. The social studies section chief at the North Carolina Department of Public Instruction provided a contact list with the name, district, school, grade, email address, and role of the teachers who participated in the training and later implemented CBI in the classroom. Permission was obtained from the State Superintendent at the North Carolina Department of Public Instruction for access and permission to use the data (see Appendix C).

Purposive nonprobability sampling was used to select eight secondary teachers as participants for the current study. A small, nonrandom, purposeful sample is used for the researcher to understand the phenomena in depth rather than obtaining common truth (Merriam, 2009). It is typical in a qualitative study to use a few individuals to present the complexity of information under exploration (Creswell, 2012). The researcher chooses essential information about the topic of interest to conduct purposive sampling (McMillan & Schumacher, 2006). Individuals are selected by establishing criteria to reflect the purpose of the study. The participants in the study consisted of secondary social studies teachers in North Carolina schools who received training in CBI. It is advantageous to select people who can provide assistance in understanding the phenomenon.

The participants who meet the criteria for the study are a typical sample. A typical sample is selected because it reflects the average person, situation, or example of the phenomenon of the study (Merriam, 2009). The social studies Section Chief who was a trainer for the social studies teachers provided access to the contact information for the secondary social studies teachers. Permission to use the information in the study was granted by the North Carolina State Superintendent (see Appendix C). A social studies consultant at North Carolina Department of Public Instruction identified the secondary teachers who participated in the professional development and implemented CBI in their classrooms. The State Superintendent granted permission (see Appendix D) for the researcher to recruit teachers from this sample. Nonprobability sampling is the most frequently used type in educational research and it entails the use of subjects who are easily available or characterize specified kinds of features (McMillan & Schumacher, 2006). The researcher used a list of teachers in the state who received training in CBI to extend an email invitation (see Appendix E) to all teachers on the list to participate in the study. The email indicated the first 10 teachers to respond to the mail no later than 14 days from the receipt of the email and the agreement to participate in the study would be considered. If additional teachers responded positively within the given amount of time, five at most would be notified of their consideration as alternates for the study in the event of withdrawal of one of the 10 original participants. Any teacher who responded after the 15 indicated above or after the deadline, received an email thanking them for their interest and letting them know the participants for the have been obtained. A total of eight teachers responded to the email invitation and agreed to participate in the study.

Informed Consent and Confidentiality

Potential participants received information about informed consent (Appendix F) and the terms of confidentiality. Informed consent includes a specification to notify participants about probable factors such as potential risks with an influence on the enthusiasm to participate (Haverkamp, 2005; Nishimura, Carey, Erwin, Tilburt, Murad, & McCormick, 2013). The design of an informed consent allows for the presentation of clear and understandable information to potential participants. Informed consent is expected before a study related process is presented to potential participants (Flewitt, 2005). Participants in the study were asked to sign an informed consent letter (see Appendix F) with information about the nature of the study including the name and purpose of the study and a description of the interview process used with participants.

Informed consent presented participants the option to weigh risks and benefits before they committed to participate in the project (Comer, 2009). The informed consent form included an explanation of the requirements of the participants for the research. Participation in the study was voluntary but participants were required to sign the consent form, acknowledging they were age 18 or older. The participants also identified their gender, place of employment, and job title. A signature on the informed consent form provided the consent of the teacher to participate in the study.

The researcher was responsible for establishing anonymity of the information provided by a participant and handling data and results in a form not easy recognizable by name or other particular characteristics (Rees, 2011). Code numbers, CBT1 through CBT10, replaced participants' names to ensure anonymity to participants. Researchers may need to use pseudonyms when providing information that could disclose the identity

of participants (Houghton, Casey, Shaw, & Murphy, 2010). The participants were be assigned a code number ensuring the study did not contain participants' names. The right of participants to withdraw from the study and the assurance there is no potential harm from participating in the study was detailed in the informed consent letter. Participants who desired to withdraw from the study could make the request by telephone or email before, during, or after the study by giving the assigned code number for identification along with the request to withdraw. At the point of withdrawal, information and data concerning the participant would be identified by the assigned code number, destroyed, and will not be included in the study. All information associated with the code number would be deleted from recorded files, laptop files, and hard copies.

Ensuring confidentiality in research is providing participants control over personal information (Yu, 2008). Autonomy is necessary to sustain trust and respect between a researcher and a participant. Refraining from conversation about information provided by participants with other individuals and communicating findings in an anonymous way exemplifies the idea of confidentiality in the framework of research (Wiles, Crow, Heath, & Charles, 2008).

The researcher analyzed and categorized transcripts and other data collected from the participants. The information collected for the study will be maintained in a locked file cabinet for three years after the completion of the dissertation. After the allotted time, all transcriptions and other data will be shredded and electronic information will be erased from the computer and all other storage platforms.

Pilot Study

A pilot study helps to enhance an assenting study (Arain, Campbell, Cooper, & Lancaster, 2010; Morin, 2013). Educators who were representative of the sample population received a pilot study participation letter (see Appendix G) through email. Three educators agreed to participate in the pilot study to ensure the transparency and understandability of interview questions. One of the educators also contributed to the study. The interviews with the pilot participants occurred as telephone interviews during a time of day convenient for participants. The pilot study participants had the opportunity to review the interview questions and provide feedback on the existing questions or suggest additional questions to add to the instrument. The researcher asked pilot study participants if the instructions were clear and what challenges they faced adhering to the instructions in the instrument (Cone & Foster, 2006; Connelly, 2008). The educators recorded feedback in a Questionnaire for Pilot Study form (see Appendix H). The feedback was used to consider modifications for the interview questions.

Data Collection

The nature of the problem determines the data collection for a study. The technique for data collection and the type of the data collected depend on the goal of the study, the conditions when the study was carried out, and the sensitivity of the participants (Gibbs et al., 2007). A researcher collects data to contribute to the understanding and outcome of the specified problem. The data collection is focused on gaining knowledge and understanding of the perceptions and experiences of secondary classroom teachers concerning the implementation of CBI.

Data was collected through semi-structured interviews of secondary classroom teachers. Semi-structured interviews allow participants to respond to questions without the restriction of specific or expected answers (Ajjawi & Higgs, 2007). Individuals agreeing to participate in the study received informed consent letters (see Appendix F) containing an explanation of the study, the interview process, and their rights (see Appendix F). The letters were mailed to potential participants with self-addressed, stamped envelopes for them to return the letters. Participants were asked to sign the letters and to return the letters with the original signature in the envelope provided. When signed consent letters were received, prospective participants were contacted by email or phone to schedule interviews that occurred by a telephone call outside of class time.

The interviews were recorded using a digital recorder and audio recording features on a laptop computer. An interview with a few open-ended questions is the general approach for data collection in qualitative research (Creswell, 2006). Using a minimal number of open-ended questions (see Appendix A) allows the participants more latitude to present their points of view, opinions, and perspectives related to their experiences with CBI. The participants were able to respond as needed with the interview process lasting a maximum range of one-hour to one and one-half hour. The participants were allowed to ask questions or follow up for clarification. The transcribed files of the interviews were coded manually and loaded into NVivo 10® qualitative data analysis software for transcribing, analyzing, and coding.

The researcher asked participants to submit documents or artifacts potentially showing the use of CBI in classrooms and the support of school leadership for using the instructional method. Artifacts demonstrate the experience, knowledge, actions, and

values of people (McMillan & Schumacher, 2006). Study participants opted not to submit documents although the researcher was prepared to review and record information from the artifacts review summary form (see Appendix B) to support reported use of CBI.

The collection of qualitative data through interviews was more appropriate for the phenomenological study because the collection of information was dependent upon the participants. The researcher used interviews to understand the perspectives of the everyday lived experience during the implementation of CBI. The phenomenological study attempted to reveal an understanding of people's perceptions, perspectives, and understanding of a particular situation rather than the opinion of the researcher. The phenomenological design of the study entailed an exploration of teachers' perceptions and lived experiences of implementing CBI. Collecting teacher data was imperative for the study to gain insight about how the adequacy of professional development, the support of instructional leaders, and the consistency of implementation across classrooms influenced the implementation of CBI.

The researcher examined predispositions and beliefs prior to the study and temporarily disregarded or bracketed them in order to see the phenomenon as it developed in the study. It was necessary for a researcher to put aside everyday understanding, judgments, and current knowledge of a phenomena to revisit the phenomena for a fresh and naïve viewpoint (Moustakas, 1994). The practice of bracketing or epoché required the researcher to refrain from personal view points or assumptions to gain understanding of the experiences of the participants in the study (Leedy & Ormrod, 2005). Epoché means to avoid judging or to look at things in a new way to see distinguish or describe what is before the eyes (Moustakas, 1994).

Upon the completion of the interviews, the recorded information was transcribed and the transcriptions were e-mailed to the participants for review, clarification, and confirmation. The participants were asked to make any additions or corrections and to respond accordingly about the approval of the transcriptions. Participants did not submit any additions or corrections to the transcriptions. Interview data collected and analyzed in the study were saved as electronic files on a USB flash drive. All data will be securely stored in a locked file cabinet for three years.

Instrumentation

Researchers use qualitative research to understand the interpretation of experiences. The interactive nature of qualitative research requires examination and recording of processes in a natural state (McMillan & Schumacher, 2006). In a qualitative study, data collection occurs to explore and explain the meaning of a phenomenon. Qualitative interviews are the most appropriate choice for the phenomenological study because they are powerful and they generate rich data through the exploration of experiences, thoughts, and meanings as relayed by study participants (Banner, 2010).

Preparation for the interview process included the development of an instrument to guide the process. Questions developed for the particular study rather than an instrument developed for another study are expected in a qualitative study (Creswell, 2012). Interviews used in qualitative research involve complex interactions used to explore experiences and they require communication and interpretation (Banner, 2010). The interviews in this study consisted of open-ended questions (see Appendix A) developed from these guiding questions:

1. How do secondary teachers perceive the adequacy of professional development they received in CBI as it relates to their confidence in implementing the strategy with fidelity?

2. How does secondary teachers' self-assess their progress of implementing CBI?

3. What are the perceptions of the consistency in implementing CBI across secondary classrooms and of how instructional leaders are providing differentiated support?

4. What supports and barriers are influencing the implementation of CBI?

Semi-structured interviews are typically a sole data source for a qualitative study with an organization around predetermined open-ended questions with questions from the dialogue between the researcher and the participant (DiCicco-Bloom & Crabtree, 2006). In a phenomenological study, the participants and the researcher are involved in dialogue for the purpose of using the participants' expressions, questions, and digressions to get to the meaning of experiences related to the phenomenon of interest (Leedy & Ormrod, 2005). During the interview process, the researcher communicated through clear questions and listened intently to participants' responses to clarify and expand questions as necessary. All participants responded to the same interview questions. The participants had unlimited time to respond to each question but the entire interview lasted forty-five minutes or less. The interview questions were piloted prior to the study with three volunteers who are educators. The researcher planned to use an alternate question if needed as a modification to the instrument as a result of the pilot.

Data Analysis

Phenomenological data analysis is performed to convert lived experience into text symbolic of the experience. A phenomenological researcher strives to translate human

actions, behaviors, meanings, and experiences as seen in real life (Ajjawi & Higgs, 2007; Banner, 2010). The researcher used a systematic method of thematic data analysis to identify participants' interpretations. The phenomenological researcher seeks data from the information raised directly or indirectly by participants including emergent as well as anticipated themes (Ziebland & McPherson, 2006). Leedy and Ormrod (2005) indicate the researcher will identify statements related to the topic after separating relevant and irrelevant information, place segments into meaningful categories, find divergent viewpoints among the participants' different experiences, and develop an explanation of the phenomenon experienced by the study participants from common themes.

The core of data analysis requires understanding the meaning of texts (Burnard, Gill, Stewart, Treasure, & Chadwick, 2008; Gibbs, 2002). Data analysis entails the use of coding schemes to categorize and contextualize data (Monette, Sullivan, & DeJong, 2011; Seers, 2012; Winters, Cudney, & Sullivan, 2010). The interviews in the study were intended to generate evidence from teachers' perspectives and experiences of implementing CBI. Interview responses were coded in order to identify key themes and patterns emerging from the data. The researcher looked for patterns, themes, and regularities as well as contrasts, paradoxes, and irregularities.

Saldaña's Coding Cycles. Structured methods in phenomenology support practical approaches for data analysis. Saldaña (2013) described coding as one of many ways to analyze qualitative data. During data analysis, a researcher examines information to discover patterns and capture the essence of participant experiences and perceptions (Burnard et al., 2008). The researcher examined personal predispositions and beliefs of the participants in this study. The personal experiences of the researcher were set aside in

order to focus on the development of the phenomenon in the study. Researchers put aside their own knowledge and experiences to describe participants' encounters in an unbiased way (Chan, Yuen-ling, & Wai-tong, 2013). A researcher brackets personal opinions to gain insight into the experiences of participants.

First Cycle Coding. First Cycle Coding methods used in coding this study included Initial, Process, In Vivo, and Descriptive coding methods. Saldaña (2013) described these methods as Elemental Coding with basic filters to provide a focus for reviewing and a foundation for future coding, specifically second cycle coding of this study. First Cycle Coding processes are shown in Figure 1 as an iterative process to chunk and summarize data.

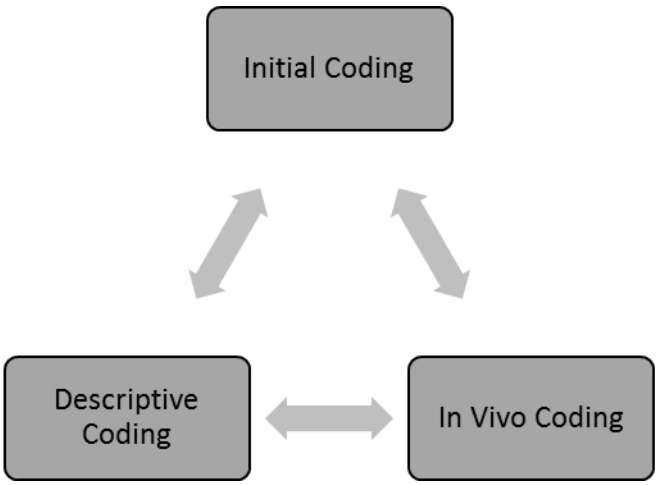

Figure 1. First Cycle Coding

Transcribed interview responses for CBT1 were reviewed and coded question-by-question and line-by-line using Initial Coding. Categories and conceptual ideas were identified based on the responses of the participant as related to the interview questions during this stage of coding. Descriptive Coding provided identification of topics in the

form of simple descriptive nouns as needed. The entire coding process was repeated for the review of the transcription for CBT2.

While coding the transcription from CBT2 and other subsequent interview transcriptions, established categories, concepts, and topics either remained the same, were modified, or deleted and others were added, if needed. During the review of each transcript, words and phrases that stood out for emphasis were coded In Vivo or verbatim to highlight and respect the voices of participants. Eclectic Coding provided a transition between First and Second Cycles. Eclectic Coding, shown in Figure 2, is the practice of applying a mixture of complementary First Cycle Coding methods such as Initial, Descriptive, and In Vivo Coding to transform words and phrases to concepts and broad concepts (Saldaña, 2013).

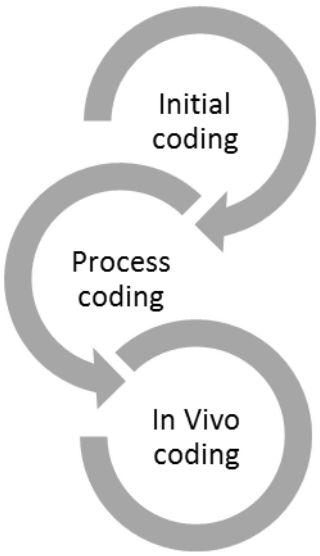

Figure 2. Transitional Coding Known as Eclectic Coding

Second Cycle Coding. A researcher proceeds with Eclectic Coding knowing combinations of data will narrow the type and number of codes during Second Cycles of recoding. Rearranging or restructuring previously coded data occurs during Second Cycle

Coding. Categories, concepts, topics, and descriptive nouns determined during First Cycle coding provided a source for review to establish an organization of similarly coded data. The researcher combined comparable codes to reorganize and refocus earlier categories, concepts, and topics. The Pattern Code provides a basis for constructing major themes through statements (Saldaña, 2013). Sub-themes emerged from Pattern Coding. The application of Focused Coding on identified sub-themes resulted in narrowing coded data into four major themes with an emphasis on process. The reduction of complex information gathered in qualitative research allowed a generalization of explanations (Gläser & Laudel, 2013). The Second Cycle Coding processes applied sequentially to determine major themes of the study are shown in

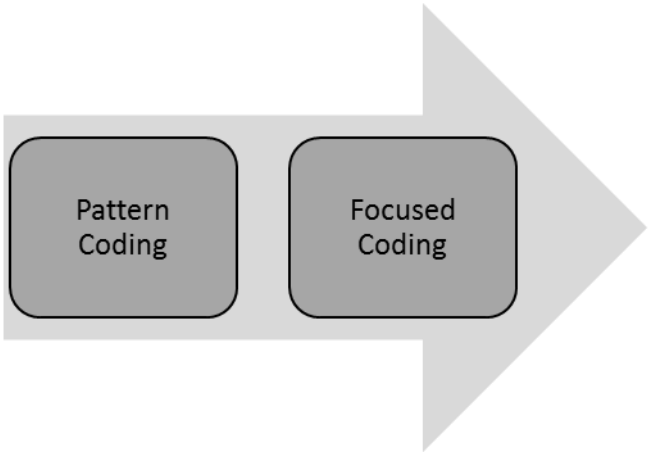

Figure 3. Second Cycle Coding Methods

Qualitative data analysis software coding. Coded categories, themes, and subcategories were validated with data analyzed in NVivo 10® software. Coding is a key part of qualitative analysis and involves attaching labels to chunks of text, which can be accomplished with NVivo 10® software (Gibbs, 2002). NVivo 10® software was also

used to capture themes and to provide pictorial versions of data. The qualitative data analysis software allowed easy storage and access to data easily manipulated by categories, themes, and codes (Burnard et al., 2008; Rademaker, Grace, & Curda, 2012).

Validity and Reliability

A qualitative study provides enough detail about the actions of people to illustrate the author's conclusion is reasonable (Merriam, 2009). Validity and reliability are synonymous with rigor as they are measures of quality used to determine whether assertions in a study can be trusted (Nicholls, 2009). A qualitative researcher must ensure information presented in the study is accurate and not a broad view or misinterpreted (Lewis, 2009). Qualitative researchers strive to control potential biases possibly existing in the design, implementation, and analysis of the study (Bloomberg & Volpe, 2008). Validity is the authenticity or credibility of a study. Gelo et al (2008) identified validity as a level of accountability and legitimacy obtained through data collection, analysis, and interpretation. Validity relates to the adequacy of the researcher understanding and representing the meanings of the participants while reliability addresses the dependability of an instrument, specifically the consistency or extent the instrument produces the same results repeatedly under similar conditions (Banister et al., 1994). Validity and reliability can bring about confidence in a study.

Internal and external validity. Validity is often defined as the extent an instrument measures what it is intended to measure (Kimberlin & Winterstein, 2008). Internal validity is the extent of the credibility, dependability, and trustworthiness of the research findings. (Merriam, 2009). Specific techniques such as triangulation, researcher reflexivity, and member checking enhance qualitative research by strengthening validity

(Lewis, 2009). Using various techniques to authenticate validity strengthens the meaning of the results of the study. These techniques, respectively, involve cross checking two or more data points, identifying and suspending assumptions, beliefs, and biases, and providing participants the opportunity to correct errors or misinterpretations of what was stated (Lewis, 2009). In a qualitative study, the researcher uses tape recordings of interviews to validate descriptive data and to eliminate as many threats to validity as possible. Interview questions in a study should be open-ended questions that are not misleading or directional to permit the participant the opportunity to elaborate on answers from a personal perspective (Lewis, 2009). Personal perceptions provided information about the viewpoint of an individual. Using open-ended questions allowed the interviewee to express personal encounters and consider individual values and beliefs as they pertained to identified situations.

"External validity can be defined as the extent the results of a study can be generalized across populations, settings, and times" (Gelo et al., 2008, p. 273). Generalizing includes applying findings to populations, settings, or times not represented in the sample (Ferguson, 2004). External validity accounts for how well the results of the study generalize to real-world situations to show the investigations connect to cultural mores, economic arrangements and structural conditions (Camic, Rhodes, & Yardley, 2003). In qualitative research, the researcher is obligated to provide enough detailed information for readers or users to generalize the findings of the study to their particular situations (Merriam, 2009). Generalized information is useful in various contexts and situations.

The exploration of teachers' lived experiences of implementing CBI was the focus of the semi-structured interviews in the current study. Interview questions were

open-ended to gain more insight into the teachers' perspectives. Open-end questions tend to illicit the most elaborate responses (Powell & Guadagno, 2008). The qualitative interview captures verbatim accounts of what happens in the interview (McMillan & Schumacher, 2006). Audio recordings will ensure a comprehensive account of the verbal communication during the interview. Triangulation of the interviews and member checking of the transcribed interviews will be used to promote validity and reliability of the study (Merriam, 2009). The purpose of the interviews was to gain insight into secondary teachers' perceptions of professional development and the implementation of CBI.

Reliability. Reliability is the accuracy of the measurement of what is happening in a study. In a qualitative study with interviews, the researcher asks for clarification or additional details if the information from the participant is not clear (Shank, 2006). Concepts such as trustworthiness or triangulation can ensure qualitative accuracy (Lewis, 2009). The researcher can move back and forth between sources of data and insights to certify their alignment. Researchers use analysis and triangulation to gauge the reliability of artifacts and lived experiences (Merriam, 2009). The design of the interview questions for the study allowed for the collection of data about the perceptions and lived experiences of secondary teachers concerning professional development and the implementation of CBI. The researcher will conduct a pilot study with the interview questions to determine if the questions are relevant, precise, and clear. Pilot testing an instrument allows for refinement of the instrument to minimize measurement error (Arain et al., 2010). The interviews with study participants were recorded and the data collected from the interviews was transcribed, analyzed, and coded using NVivo 10® software for

additional validation. The participants received interview transcripts to check for inaccuracies and omissions. The use of transcript and individual perspectives assist in achieving reflexivity, transparency, and rigor (Ajjawi & Higgs, 2007). Reliability is based on the assumption there is a single truth and studying it will produce the same results (Merriam, 2009).

Chapter Summary

Qualitative research is appropriate to obtain a deep understanding of a setting or activity from the experiences and perspectives of research participants (Bloomberg & Volpe, 2008). A research method is chosen to match the problem the study will address (Creswell, 2012). The proposed qualitative study sought to provide general knowledge and support to the scholarly community by gaining insight into secondary teachers' perceptions of professional development and the implementation of CBI in the secondary classroom. Phenomenology underlies qualitative research with a focus on the conscious experience of everyday life and social action of the participants in the study (Merriam, 2009; Flood, 2010). A phenomenological study is an attempt to capture the inside meanings and the world of individuals and when the design is used appropriately it can generate rich and perceptive patterns of interpretation (Shank, 2006). The research study emphasized the importance of teachers' perceptions of professional development as it relates to implementing CBI in secondary classrooms.

CBI promotes teaching for a "deeper understanding and the transfer of knowledge through a concept-based curriculum and instruction model" (Erickson, 2007, p. 4). Shortcomings among educational resources leave the responsibility for linking underlying concepts and principles from content to the teachers or students (McCoy &

Ketterlin-Geller, 2004). The qualitative method supported the collection and analysis of emerging themes from data collected through semi-structured interviews about secondary teachers' perceptions of the relationship between professional development and the implementation of CBI. Qualitative interviews are powerful and adaptable tools that produce rich data especially in little known areas by facilitating the exploration of participants' lived experiences and perceptions (Banner, 2010). The analysis of data using NVivo 10® in conjunction with transcribed interviews and member check will provide support for reliability and validity in the study.

Presented in Chapter 4 is a presentation of the results of the phenomenological, qualitative study. Details of the data collection methods and the analysis of the data using NVivo 10® software are included in the chapter. The results of the semi-structured, open-ended interview questions and the review of artifacts submitted by study participants, including explanations and discussions, are communicated.

Chapter 4

Results

The purpose of this qualitative phenomenological study was to gain insight into secondary teachers' perceptions of professional development received to prepare for the implementation of CBI. Eight North Carolina secondary social studies teachers provided information about their lived experiences through open-ended semi-structured interviews. The phenomenological approach leads to a profound understanding of human experience (Ivey, 2013; Saldaña, 2011). Interview responses were transcribed and analyzed to reveal themes based on understanding of experiences (Rowley, 2012).

Chapter 4 presented the results of the study and an analysis of information obtained from semi-structured interviews. Transcribed responses were coded manually using Saldaña's First and Second Cycle Coding techniques and NVivo 10® data analysis software. In this study, the researcher explored the lived experiences of the participants in an attempt to understand the impact of professional development on teacher implementation of CBI. Interpretation of or meaning associated with an event may influence understanding (Tuohy, Cooney, Dowling, Murphy, & Sixsmith, 2013). The study was guided by the primary question, *what is the impact of professional development on teacher implementation of CBI in the classroom?* Explicit interview questions (Appendix A) were developed for the study based on the central research question and supporting questions.

Information from a pilot study permitted the researcher to answer questions before proceeding with a full-scale study (LaGasse, 2013). Three secondary teachers participated in the pilot study. Pilot participants were encouraged to engage in discussion

of presented questions and they were asked probing questions as needed to explore lived experiences and perceptions concerning their implementation of CBI. Results and descriptions of the analysis of interview data are presented in this chapter.

The qualitative data in the study was reduced for understanding and used to establish themes and patterns (Berg, 2009). Chapter 4 includes an explanation of the methods and procedures used to discern themes and an account of how the results of the analysis relate to the research question.

Data Analysis Procedures

The study engaged the phenomenological method to explore perceptions and lived experiences. The phenomenological study ventured to reveal an understanding of a particular situation through perspectives (Chenail, 2012). Phenomenology provided an internal examination of reality constructed from the mind or the environment (Greenfield & Jensen, 2012). Data collected through semi-structured interviews in the study were transcribed and coded to discover themes and patterns centered on the reported lived experiences of study participants.

The responses and statements transcribed from the interviews were coded using Saldaña's First and Second Cycle Coding methods. Saldaña (2013) outlined First Cycle Coding methods to employ during initial coding of data, a hybrid method for transitioning between two cycles of coding, and second cycle coding methods require analytic skills to reanalyze and reorganize previously coded data. Table 1 illustrates the First and Second Cycle coding methods and descriptions of the process observed within each method.

Table 1

First and Second Cycle Coding Details

Cycle	Coding Method	Description
First cycle coding	Initial coding	Categorized question by question, line-by-line one interview at a time
	Descriptive coding	Identified major concepts as nouns
	In Vivo coding	Identified words and phrases of participants as they stand out
Transitional coding	Eclectic coding	Read through data repeatedly and chunk to summarize
	Initial coding	Reviewed concepts for commonalities and similarities even across concepts
	Process coding	Reduced concepts to broad concepts using gerunds to indicate action
	In Vivo coding	Actual words of participants that convey the experience
Second cycle coding	Pattern coding	Developed sub-themes from concepts
	Focused coding	Developed themes from sub-themes

Qualitative Data Analysis Software

Interview responses transcribed in Microsoft® Word documents were uploaded into NVivo 10® qualitative data analysis software. Auto coding in NVivo 10® involved coding responses for 15 questions standardized throughout the interviews for each participant. Question-by-question responses for all participants were grouped together by question number.

The nodes generated in the NVivo 10® software included the perceptions and lived experiences of the participants documented in hierarchical nodes. The analysis process entailed the use of coding trees to search for significant themes in the data (Winters, 2010). Tree nodes reflected emerging themes while child nodes illustrated subthemes corresponding to responses to interview questions. Saturation was achieved when responses were repetitive and no new themes emerged.

Interview Questions

The central question of the study was: *What is the impact of professional development on teacher implementation of concept-based instruction in the classroom?* The purpose of the central research question was to learn about the experiences of secondary teachers implementing CBI. The 15 interview questions were based on four supporting questions aligned with the central research question:

1. How do secondary teachers perceive the adequacy of professional development they received in concept-based instruction as it relates to their confidence in implementing the strategy with fidelity?
2. How do secondary teachers self-assess their progress of implementing concept-based instruction?

3. What are the perceptions of the consistency in implementing concept-based instruction across secondary classrooms and of how instructional leaders are providing differentiated support?

4. What supports and barriers are influencing the implementation of concept-based instruction?

The four supporting questions respectively focused on (a) adequacy of professional development, (b) progress with implementation, (c) implementation across classrooms, and (d) supports and barriers of implementation. The interview questions support the central research question for the purpose of identifying emergent themes concerning professional development and teacher implementation of CBI. Table 2 outlines the alignment of the supporting and research questions.

Table 2

Alignment of Supporting and Interview Questions

Supporting Question	Supporting Question Focus	Aligned Interview Question
1. How do secondary teachers perceive the adequacy of professional development they received in concept-based instruction as it relates to their confidence in implementing the strategy with fidelity?	Adequacy of professional development	1. What professional development did you receive in preparation to use concept-based instruction? 2. What understanding did you gain from the professional development on concept-based instruction? 3. What past experience was your understanding based upon?

2. How do secondary teachers self-assess their progress of implementing concept-based instruction?	Progress with implementation	4. Did you understand concept-based instruction well enough to implement it in your classroom after professional development? 5. Why do you feel this way? 8. How has your use of concept-based instruction progressed since receiving professional development?
3. What are the perceptions of the consistency in implementing concept-based instruction across secondary classrooms and how instructional leaders are providing differentiated support?	Implementation across classrooms	6. What does concept-based instruction look like in your classroom? 7. Is there a difference in the way teachers across classrooms in the school implement concept-based instruction?
4. What supports and barriers are influencing the implementation of concept-based instruction?	Supports and barriers of implementation	9. Who do you go to for support implementing concept-based instruction? 10. What support is provided by instructional leaders to the teachers who are implementing concept-based instruction? 11. If support is provided by instructional leaders, how is it differentiated? 12. How do instructional leaders influence the implementation of concept-based

		instruction? 13. What would make it difficult to use concept-based instruction in your classroom? 14. Are there barriers to prevent the successful implementation of concept-based instruction at your school?
All questions	General	15. What is your general opinion of CBI as a regular strategy in your classroom?

Interview Question 1. *What professional development did you receive in preparation to use concept-based instruction?* The purpose of the question was to prompt participant discussion around the professional development they received to prepare to teach using CBI. Participant responses provided insight about the structure, adequacy, and location of professional development offered prior to the implementation of the instructional strategy. The question was designed to gather information about the adequacy of professional development offered to train teachers to implement CBI.

Interview Question 2. *What understanding did you gain from the professional development on concept-based instruction?* The question encouraged participants to think about their meta-cognitive experiences as a result of professional development for CBI. Understanding gained from the training experience would have an impact on instruction and implementation of the strategy. Responses to this question could indicate whether or not participants felt adequately prepared to implement CBI.

Interview Question 3. *What past experience was your understanding based upon?* The purpose of this question was to learn the extent of past education or training on CBI. Participants were urged to reveal experiences about their teaching and learning. Responses could explain prior learning and provide a connection to new learning experiences with a focus on the adequacy of professional development. Participants could give insight into their understanding of the overall meaning of CBI and any background knowledge or experiences in support of familiarity with the strategy.

Interview Question 4. *Did you understand concept-based instruction well enough to implement it in your classroom after professional development?* Responses to this question reveals participant self-reflection into classroom practices and procedures. Replies could reveal participant thinking about the reality of implementation in the classroom. The answer to this question provided data regarding individual ownership of learning and planning future use of the instructional strategy.

Interview Question 5. *Why do you feel this way?* Participants were given the opportunity to provide more details of their sensemaking of CBI. This question allowed participants to self-assess their progression in implementing CBI in the classroom. Participants revealed details of changes in instruction and planning as well as student learning.

Interview Question 6. *What does concept-based instruction look like in your classroom?* Participants were asked to describe instruction and student involvement in the classroom during the use of CBI. The question prompted participants to explain instructional methods and student assignments. Participants expanded responses to include information about student involvement in the use of concepts for learning.

Interview Question 7. *Is there a difference in the way teachers across classrooms in the school implement concept-based instruction?* Responses for the question indicate the perception of the consistency of implementation and collaboration among teachers using CBI. Participants provided insights into individual teaching style, attitude, and motivation. Organizational expectations of teachers also surfaced in responses.

Interview Question 8. *How has your use of concept-based instruction progressed since receiving professional development?* The question probed participants to expound upon their personal implementation of CBI. Participants reflected on their teaching before and after learning about the instructional strategy. Participants discussed their level of implementation related to personal motivation and other responsibilities and priorities.

Interview Question 9. *Who do you go to for support implementing concept-based instruction?* The question allowed participants to consider encouragement and assistance received to effectively implement CBI. Participants openly shared their experiences with either receiving support or dealing with the lack of support in using the strategy. Responses to the question provided awareness of the involvement of leadership, teacher leaders, and learning communities in the use of a new instructional strategy in the classroom.

Interview Question 10. *What support is provided by instructional leaders to the teachers who are implementing concept-based instruction?* The question probed participants to consider if leadership is supporting instructional shifts. Support and indifference from leaders were revealed by participants. The question prompted

participants to reflect on professional development and meetings as a framework for supporting the implementation of concept-based instruction.

Interview Question 11. *If support is provided by instructional leaders, how is it differentiated?* Answers provided by participants indicated the perception of differentiated support through scheduling. Participants revealed the lack of support influenced the implementation of CBI. Responses indicated differences in the level of support within schools as well as across schools participating in the pilot.

Interview Question 12. *How do instructional leaders influence the implementation of concept-based instruction?* The purpose of the question was to discover what conditions exist to encourage teachers to implement CBI. Participants were given the opportunity to describe specific support provided leaders. The openness of the question permitted participants to explain the school culture and environment.

Interview Question 13. *What would make it difficult to use concept-based instruction in your classroom?* The purpose of the question was to understand teacher perception of barriers directly influencing the implementation of CBI. Participants described existing conditions in the organization interfering with successful implementation. This question prompted participants to discuss barriers of implementation.

Interview Question 14. *Are there barriers that prevent the successful implementation of concept-based instruction at your school?* Responses for the question centered on personal ownership of using CBI. Organizational concerns such as mandated priorities and lack of support were named as challenges. Participants expressed awareness

of the complexity of adjusting instruction to use CBI with fidelity and individual motivation as possible barrier in the positive application of CBI.

Interview Question 15. *What is your general opinion of concept-based instruction as a regular strategy in your classroom?* The purpose of the question was to allow participants to express a subjective opinion about CBI. Participants provided data regarding the usefulness of the phenomenon or the inability to successfully implement the strategy. Responses presented insight into student engagement and the feasibility of the use of CBI.

Data Analysis and Results

The study included secondary social studies teachers in North Carolina who participated in a pilot to learn, understand, and implement CBI. A total of eight teachers from four districts and four different schools participated in the study. Participants responded to 15 interview questions about their perceptions and lived experiences concerning CBI. The information collected from the telephone interviews provided the data for analysis.

Interview transcripts were analyzed manually using Saldaña's First and Second Cycle Coding methods. The data were organized into categories, concepts, topics, and themes, and reorganized as themes with a focus on process. The data were also imported into the NVivo 10® software program for the purpose of obtaining emerging themes organized as nodes. NVivo 10® results were used to substantiate themes determined through manual coding. The researcher identified themes for the study based on the validation of the manual and computer software coding processes.

Themes

A thematic outline below illustrates established themes and sub-themes followed by detailed narrative of each theme. The themes were as follows:

1. Preparing for CBI
    a. Teacher perception of professional development
    b. Teacher understanding
    c. Individual ownership of learning and implementing
2. Implementing CBI
    a. Shifting instruction
    b. Progress with implementation
    c. Benefits of implementation
3. Supporting implementation
    a. People supporting implementation
    b. Types of support for implementation
    c. Influence of support on implementation
4. Facing Challenges With Implementation
    a. Teacher challenges
        i. Individual teacher issues
        ii. Instructional issues
    b. Student challenges
    c. Organizational challenges
        i. Local level challenges
        ii. State level challenges

These themes and sub-themes were common among responses to the interview questions. The researcher presents the experiences of CBI based on coding and analysis of participant responses.

Theme 1: Preparing for CBI

The teachers who participated in this study were involved in a pilot designed by social studies consultants at the state Department of Public Instruction. The purpose of the pilot was to train secondary teachers in the use of CBI in secondary social studies classrooms, support teachers in the development of concept-based units, and encourage teachers in the implementation of CBI including the use of the units developed during and after the pilot. State level consultants who received training on CBI from H. Lynn Erickson, an author and international CBI trainer and presenter, provided initial and follow up training as part of the state-wide pilot.

Teacher perception of professional development. Participants reported receiving training provided by state consultants as well as local training to prepare for implementing CBI. School teams of secondary social studies teachers from each school who participated in the pilot attended a three-day professional development training. Initial training for school teams was conducted in a facility in the western part of the state as opposed to a school site or the state Education Building. Participants suggested the dedicated time away from distractions provided the opportunity to learn and plan more effectively for CBI. The initial training was followed by additional training sessions at school sites and virtual follow up sessions as needed.

All eight of the study participants were involved in the state pilot for CBI. One participant reported "*We had a 3-day session where we worked with three ladies. They*

were very informative about approaching the beginning steps, initial steps, working from a concept to various other avenues and aspects of what we were going to be teaching within social studies." Two participants stated the professional development offered by the state was traditional with an enormous amount of information and no follow up training or assistance with implementation. Four participants emphasized the training helped prepare them to implement CBI. Six participants noted the training enhanced current practice. Participants revealed the presence of an author and national presenter on concept-based curriculum and instruction, Dr. H. Lynn Erickson, at the state training. Participants indicated they received one of Erickson's books to use as a resource in writing units and lessons.

Four teachers in the study worked in school level professional learning communities (PLCs) during and after locally developed and facilitated professional development. These participants reported they were able to integrate CBI with lessons developed during training on new state standards. Five participants acknowledged attending local professional development not specifically aligned with CBI. These participants expressed the ability to connect this training with their understanding of CBI on their own. Two participants reported participating in local training designed to integrate CBI in unit and lesson plans.

Three participants implied facing challenges directly related to the professional development as well as local issues. One participant expressed feeling overwhelmed by the material in the training because the instructional strategy is very different from current practice. The same participant also implied additional guides and models were needed to further understanding of CBI because there was no support from instructional

leaders. Additional challenges noted were a lack of deep, operational understanding after training and lack of understanding of how to plan for the implementation of CBI.

Teacher understanding. Participants provided explanations of understanding CBI after state professional development sessions. Four participants described understanding the instructional strategy due to alignment with current teaching practices, knowledge, learning style, and experiences. Three participants indicated "Concept-based instruction is just good teaching." Three participants responded positively about the ideas of CBI and classroom implementation. Participants revealed gaining an understanding of the timeless nature of concepts, the importance of using concepts in unit and lesson plans with a lens to focus instruction and learning, and the value of tiered lessons to differentiate instruction for deeper understanding by students.

One participant shared having the ability to write and use concept-based lessons plans. Another participant revealed, "*I felt comfortable with the idea of teaching a concept and trying to run with that concept in the classroom in a unit or in a lesson.*" Responses from five participants revealed the barriers, *unsure of how to implement*, *takes time to use*, *conflicts with other priorities*, *overwhelming*, and *no support for implementation*, which surfaced after training. Four out of eight participants considered time as a major obstacle in understanding and using CBI.

Individual ownership of learning and implementing. Three participants indicated the need for continued development of their own knowledge and understanding of CBI after the training. Two participants recognized concept-based was "hard" to implement but acknowledged working with colleagues and resolving to do more to enhance application of the strategy. Three participants suggested they felt comfortable

with the tools they were provided during the state professional development sessions. One participant expressed a continuation of building a personal toolbox in order to reinforce new learning. Taking personal ownership after training involves implementing in the classroom after receiving training. Four teachers felt the need to expand on what they learned about CBI. One participant noted, "*I really had to read on my own some and talk with other people and follow up discussions and other workshops and things that I've been to…"* Two participants implied more training was needed but there was a willingness to experiment with CBI in the classroom.

Theme 2: Implementing CBI

During and after receiving professional development to learn how to use CBI, secondary teachers reflected and planned implementation in classrooms. Teachers participate in learning experiences to acquire knowledge (Phipps, Prieto, & Ndinguri, 2013). Study participants reported steps taken to implement CBI after professional development on the topic. The sub-themes associated with this theme, *shifting instruction, progress with implementation, and benefits of implementation,* were derived from participant responses and reflections.

Shifting instruction. As a result of information presented during professional development about CBI, participants reflected on their teaching to determine how the instructional strategy would fit or change current instruction. The participants realized CBI would add value to current classroom practices. One participant stated, *"Implementation is more of a long-term process rather than an immediate transformation. It involves restructuring your assessments to allow students the opportunity to share what they know rather than just repeat what they have been told and*

it requires a more collaborative effort between students and between students and the teacher." Differences among current instruction and the use of CBI mentioned during the interviews included the use of concepts and other important features of this method to enhance instruction, the move from traditional teaching to student-centered teaching, and the change required in planning and structuring assessments. Six of the eight teachers experienced a change in their instruction after the training while two teachers indicated they were already using aspects of CBI in the classroom. Changes in instruction included (a) thinking about where the lesson is going, (b) starting with the big idea, (c) relating lessons to the life of students, and (d) writing lessons and rearranging existing lessons to include concepts.

Three participants expressed understanding or liking CBI but they revealed challenges with implementation. Two of these participants expressed it would not be easy to change teaching and the other participant specified having too many class preparations to effectively use CBI. Six participants reported the overwhelming nature of the information, the vast difference in teaching and structuring a concept-based lesson, and the amount of the time needed for implementation. More support and professional development were identified as needs to sustain classroom implementation. Two participants suggested CBI either disintegrated or was never implemented at their schools.

Participants who acknowledged a shift in instruction cited becoming more conscious of stressing connections and timelessness of concepts. One participant revealed changing to use CBI to inform instruction and decision-making. Although one participant has become knowledgeable in using CBI, *"...being able to take it to additional levels and*

things of that nature has slowed because of having to jump from prep to prep." Seven of the eight teachers reflected on current practice and decided to use the ideas and methods of concept-based to enrich their practice. These participants communicated trying CBI in the classroom although individual use varied and lasted different lengths of time.

Progress with implementation. Participants were asked to reflect on their progress with the implementation of CBI after receiving professional development. For one participant, the implementation was uncomplicated because the ideas and components are aligned with practices the teacher already employed including the use of student experiences for application of content. Four participants shifted routines to have a focus on student learning and understanding. One of the four participants reflected, *"Teaching this way takes more organization and thoughtfulness up front. It's a big shift from the way I was educated and it's a big shift probably from where I spent the first ten year or so of my career because I just didn't understand."*

Planning with student outcomes in mind and using student needs to guide instruction were the major ways participants managed CBI. Three participants reported minimal change due to reasons such as feeling overwhelmed, having other priorities, needing more time to collaborate with others using the method, or changing teaching responsibilities such as subject or grade level. Certain aspects of CBI led to the awareness of making connections in lessons using concepts and generalizations. One participant noted student success increased when units based on concepts were used for instruction.

Implementation of CBI varied by teacher and ranges of approach. An innovation is rarely smooth during the initial implementation (Olafson, Quinn, and Hall, 2005). Three participants consistently described CBI as part of good teaching and emphasized

they were already using bits and pieces of what they learned during the professional development. Participants reported teachers who teach tested grade levels and subject areas have priorities and current models of focus preventing them from concentrating on the implementation of CBI. Implementation in these instances was minimal to nonexistent. One participant acknowledged CBI as appropriate for concept rich subject areas such as social studies. Two participants highlighted individual comfort level and teaching style as key factors in determining the use of CBI.

Three participants mentioned *veteran* and *older* teachers either had more difficulty with implementation or they did not use the strategy. One participant informed the researcher of one or two teachers in the school who used CBI, but explained other teachers continued with traditional lecture in spite of training in CBI. Two participants complimented *experienced* teachers who already use aspects of CBI and reported these teachers found the training enhanced their current instructional methods and practices.

Participants mentioned the lack of time as the cause of the continued use of facts. One participant concluded, "*...you don't have enough time to really stay on something long enough to develop conceptual things."* Expectations based on the curriculum were also named as a reason for a low level of implementation. One participant expressed the new standards allow teachers to teach more conceptually. Two participants identified CBI as an effective and beneficial way of teaching.

Benefits of implementation. Benefits of CBI were reported in the study. Participants revealed the instructional method worked for teachers and students. All participants relayed they would use CBI on a more regular basis if possible without the focus on other priorities and time constraints. Although two participants reported not

using the strategy very much after the training, the other five participants noted some type of benefit. Two participants cited more collaboration with students as a major benefit of using CBI. Four participants described the use of discussion for understanding of the concept. Assessments were improved by two participants to promote student understanding. One participant emphasized, *"Traditional assessments of multiple-choice have been replaced by more meaningful assessments which require students to take what they have learned and show understanding of the curriculum topics."* Student reflection on themes and the relevance of concepts to students for better understanding emerged as benefits of using CBI.

Participants viewed the use of CBI as a way to engage students in learning. One participant noted, "*I've learned how to teach social studies in a manner which helps students make connections to previous lessons and focus on concepts and major themes rather than events in isolation."* Student collaboration and increased student understanding through connecting facts and finding relevance were expressed as benefits of CBI. Participants realized CBI can work for all types of learners especially when instruction and learning includes asking questions and having discussions around the key concepts. One participant emphasized, *"Our scores steadily rose. Although I can't give concept-based full credit, I think it helped. I became more effective and we got better results. I've seen steady improvement over time."* During CBI, students focus and engage more in the classroom by concentrating on themes. According to one participant, "*It creates a way for you to make facts, events, and time periods connect and are relevant and makes sense to students*."

Teachers may approach the implementation of a new instructional strategy in different ways. At the beginning of a change process, participants may have limited awareness of an innovation resulting in a low level of concern during the initial implementation (Morgan, Keitx, & Wells, 2013). Participants in the study acknowledged teacher comfort level and teaching style guide the level of implementation of a new instructional strategy. Levels of implementation reported included not implementing, implementing incidentally or until other priorities were established, or implementing with comfort.

Theme 3: Supporting Implementation

Learning opportunities are designed for educators with the expectation of change in practice. Formal learning experiences are designed and provided for the enhancement of performance at the organization and employee levels (Burke & Hutchins, 2008). In this study, participants responded to interview questions about their implementation of CBI and the support provided for the successful use of CBI in the classroom. Participant responses provided details about *people supporting implementation*, *types of support for implementation*, and the *influence of support on implementation*.

People supporting implementation. Colleagues were named as supporters of teachers implementing CBI. Six participants revealed they go to colleagues to discuss or get resources to assist in using the instructional strategy. One of the six also reported no one person was responsible for supporting the implementation of the instructional strategy. One participant expressed having support once from a former curriculum director although no one within the system was appointed to support teachers during implementation.

Although six of the participants reported support as needed from colleagues and others, none of the participants shared information about an organized or consistent support system from instructional leaders, teacher leaders, colleagues, or others. One participant indicated "*...at times, I'm able to directly connect with the faculty or colleagues but to say do I have anybody that I can truly lean on to get better at what I'm doing, I haven't found as much success."* All participants communicated support was available from colleagues, a professional learning community (PLC), or state social studies consultants. Three participants suggested state social studies consultants responded to emails to assist as needed. Although three participants cited receiving support through PLCs, information about specific interaction with these groups was not provided. One participant named the principal as the primary supporter.

Two participants explained their principals offered support for the use of CBI in the classroom. One participant reported support from the principal was short-lived due to the retirement of the principal at the end of the pilot. The new principal supported other initiatives and established priorities not inclusive of CBI. Another participant shared a similar experience with a supportive principal leaving and a new principal who did not buy into the use of CBI. Two participants had instructional leaders or teachers in the support role for the use of CBI. Two participants express the lack of administrative assistance for CBI. One participant stated, *"...I don't think administrators knew anything about it* [concept-based instruction]*...I don't think they had any knowledge of it at all."* One participant reported working in a school with an emphasis on the learning-focused model with no additional resources or support for CBI although the teacher can identify factors of CBI in the learning model.

Types of support for implementation. Participants experience different types of support or no support based on organizational buy-in for new methods of instruction. One participant in the study teaches at a school where professional development is offered as a way of continuous improvement, maintenance of continuing educational units, or keeping licensure current. This participant expressed the professional development was not designed around CBI. Another participant stated leaders allowed teachers to decide whether or not they should use CBI. The participant reported instructional leaders in the history department offered stronger support than administrative leaders who essentially offered no support. Participants shared support may consist of PLC meetings, staff development with reference to CBI, assistance from state consultants, time designated for planning, and common time to plan with same grade level teachers.

All participants in the study were currently or had been social studies teachers during their involvement in the state pilot involving CBI. Two participants had no support for the implementation of CBI. Support offered to one participant by the principal was the same for all teachers because the principal encouraged grade levels to work together. Another participant also receives equal support along with colleagues in terms of requests such as time or location to work. Two participants received support through department meetings. Department meetings, PLC meetings, and regularly scheduled social studies department meetings were used to facilitate more subject specific planning for CBI for all high school social studies teachers one pilot district. One participant experienced sharing through PLC meetings with differentiation of support based on course taught, success of students, or specific unit plan for instruction.

Influence of support on implementation. The participants in the study planned individual implementation of CBI based on various situations they experienced. The support participants received inspired many aspects of the use of the instructional strategy. Classroom observations and lesson plan reviews were conducted by the administrators of two participants to encourage the application of CBI. One administrator encouraged teachers to experiment with the new way of instruction and provided feedback through observation conferences and follow up. The other administrator directed instructional leaders to provide resources and share ideas with teachers in an effort to align CBI with the learning focus model in use by all schools in the district.

One participant indicated, *"He* [the principal] *was adamant that it was a good way for the school to have access to training that we might not otherwise have access to. It wasn't the situation where you could really opt out."* Another participant served as social studies department chair and ensured access to resources and provided opportunities to share ideas and collaboratively plan in each grade level. Grade level leaders at one school supported one of the participants and peers who were implementing CBI but this support ceased when a new administrator came to the school.

The variance of influence for participants ranged from no push for teachers to use CBI to teachers making the determination of the extent they would use the instructional strategy. One participant voiced concerns "*When we came back* [from training] *we did not have a meeting about it. The other teachers were not told about it. There were zero attempts to get other teachers involved with it, the other social studies teachers or any other subject at all."* CBI was not established as a local priority for six participants but

the opportunity to use the instructional strategy in addition to the main priorities and initiatives at the school was available for those who were self-motivated.

Theme 4: Facing challenges with implementation

In spite of training and support by the state social studies consultants and varied implementation and support circumstances, all of the teachers participating in the study revealed facing challenging situations after training and during implementation of CBI. One participant expressed there were no barriers to prevent the successful implementation of CBI. The other seven participants shared obstacles they faced when trying to implement a new instructional method.

Teacher challenges. Six of the eight participants in the study indicated the lack of time was problematic for such things as exploring materials, teaching in-depth lessons, planning, allowing adequate time for true CBI, and integrating with the state standards. One participant acknowledged, "*We have to show that we value it* [concept-based instruction] *and by doing that, that means we have to give it our time."* Teacher buy-in also surfaced as a common barriers. Convincing teachers to move from traditional instruction to student-centered and resistance from seasoned teachers were two aspects of buy-in mentioned by three participants. One participant explained only using a skeleton of CBI due to numerous local constraints. Other issues for teachers included the strategy is overwhelming and seems unrealistic, more support is needed for effective implementation, the strategy is too different from current practice, and personal resolve is a necessity during implementation

Student challenges. Student attendance and student personal problems surfaced as potential issues with the successful implementation of CBI. One participant remarked

student absence leads to missing background information from the lesson. When students learn core concepts, those concepts can be applied throughout a unit providing students attend class for the lesson. One participant proposed, *"Concept-based instruction takes time because it's depth of understanding takes time to model and then build and then give them* [students] *the opportunity to delve into a topic."* Participants who expressed the lack of appropriate time to devote to CBI as needed for successful implementation also noted students did not see the connectivity.

Organizational challenges. Local mandates such as specific practices and teaching models surfaced as barriers for the implementation of the new instructional strategy. Current curriculum, lessons, and assessments lack alignment with CBI. Three participants specifically mentioned a change in administration as a challenge for implementing. A change in administration often left no support from leadership for the strategy. Four participants mentioned local priorities undermined the implementation of CBI. Adjustments in teaching assignments and too many preps were shared by two participants as challenges. Lack of support, common planning, and collaboration were mentioned as other organizational challenges.

Various testing models in use are written for more traditional learning without a connection to concepts or other aspects of CBI. State mandates including new state standards and assessment requirements surfaced as a common barrier among three participants. Testing presents a dilemma in because the taught curriculum is not the tested curriculum and test results are used as a measure of teacher effectiveness. One participant expressed the time needed for CBI may be in direct conflict with preparing for state tests. Two participants indicated the state is in the process of changing the duration of some

courses to provide more instructional time. Time consuming standards and the structure of the state standards present time and planning challenges when teachers prepare to use CBI. Three participants acknowledged the state consultants were not able to continue the pilot to support the use of CBI because the funding for state pilot was cut. State guidelines and recommendations for standards and assessment impact the implementation of new instructional strategies.

Chapter Summary

The purpose of this qualitative phenomenological study was to gain insight into secondary teachers' perceptions of professional development received to prepare for the implementation of CBI in the classroom. Chapter 4 captured data from interviews with eight secondary social studies teachers in North Carolina. The participants provided responses with vital details in understanding the impact of professional development on teacher implementation of CBI in the classroom. Open-ended interview questions were used for data collection. The data were organized, coded, and categorized during analysis. Themes emerged from the data analysis with guidance from Saldaña's coding cycles. The findings from the interview responses reflect a positive perception of teachers concerning professional development and the implementation of CBI. Conclusions, interpretations, and recommendations based on data collected in the study and the literature review are presented in Chapter 5 to increase the knowledge about the implementation of CBI.

Chapter 5

Conclusions and Recommendations

Traditional methods of instruction have involved conveying knowledge to students through rote practices. The need to prepare students for college and career readiness requires instructional practices supporting transferrable learning across situations and time. Teachers require support in the classroom to facilitate effective curriculum delivery to meet the demands for increased student achievement (Lee, Cawthorn, & Dawson, 2013). CBI is a method of instruction with opportunities for students to make connections and understand relationships among transferrable. Student experiences and meanings provide the basis of new knowledge (Hardin & Richardson, 2012). The incorporation of CBI in the classroom requires understanding of the method and the effective implementation of the instructional method.

The purpose of this hermeneutic phenomenological study was to explore the perceptions and lived experiences of teachers who were implementing CBI in the secondary classroom. The focus of the study was to distinguish factors influential on the use of CBI. The study was accomplished by interviewing eight secondary teachers to understand their perceptions, practices, and knowledge after receiving professional development and implementing CBI in the classroom.

Chapter 1 provided the problem and purpose for exploring teacher perceptions of CBI and a context for the instructional style. Chapter 2 provided a consideration of the research for the study. Chapter 3 detailed the methodology used to collect, code, and analyze data. Chapter 4 contained the discussion and analysis of the results of study. Chapter 5 includes the findings guided by the central question of the study: *What is the*

impact of professional development on teacher implementation of concept-based instruction in the classroom? The central question was supported by four leading questions:

1. How do secondary teachers perceive the adequacy of professional development they received in concept-based instruction as it relates to their confidence in implementing the strategy with fidelity?

2. How do secondary teachers self-assess their progress of implementing concept-based instruction?

3. What are the perceptions of the consistency in implementing concept-based instruction across secondary classrooms and how instructional leaders are providing differentiated support?

4. What supports and barriers are influencing the implementation of concept-based instruction?

A discussion and interpretation of the results of the study including conclusions, implications, recommendations, and a summary to explain and discuss the implications of the study are presented in Chapter 5.

Conclusions

Teachers plan and lead instruction to support student learning and application. Teachers and their teaching are the most important factors with an explicit influence on student academic achievement (Lee et al., 2013). Teacher designed instructional support enables students to become more successful (Bost & Riccomini, 2006). Student engagement in deeper understanding occurs through the use of concepts for a high rate of transferability of learning over time and across situations. Teacher preparation for

implementing an effective instructional strategy requires teacher engagement in planned, ongoing professional development including an implementation support system.

The purpose of the qualitative hermeneutic phenomenological study was to recognize teachers' understanding of CBI after receiving professional development, understand how teachers approach the implementation of CBI, and determine perceived supports and barriers influencing the successful use of CBI in secondary classrooms. Eight secondary social studies teachers who received professional development in CBI from state social studies consultants at the North Carolina Department of Public Instruction provided data for the study through responses to interview questions. Participants' responses were organized, coded, and analyzed into themes and sub-themes to reveal teachers' perceptions of the impact of professional development on teacher implementation of CBI in the secondary classroom.

Research Findings Relative to the Literature Review

Educational reform requires improvement in student achievement through the implementation of effective instructional strategies. Experts believe educational reform policy can advance the quality of teaching and enhance students' learning (Martin & Lázaro, 2011). The move for educational reform in past decades raised concerns about teacher quality. The literature review revealed national apprehension about teacher quality was addressed in NCLB legislation. The legislation required states to offer high quality professional development to teachers. Traditional educational strategies fail to meet the challenges in developing competitive students for a global world (Clark, 2010; Loveland, Miyakawa, & Hirayama, 2004). Research shows CBI aligns curriculum with instruction and assessment through the use of concepts (Twyman & Tindal, 2005). The

effective use of CBI helps teachers more successfully address the needs of students in the classroom towards improved achievement.

Findings show secondary teachers in North Carolina acknowledged receiving professional development ranging from standard to useful in CBI provided by state consultants. Participants indicated the professional development was intense training due to the volume of information, the time it would take to plan for CBI, and the time required to develop concept-based units. These factors impacted participant understanding, the degree of implementation, and the duration of implementation of CBI. Independent of any perception of training, all participants indicated gaining an appreciation of CBI for the focus on concepts and student understanding. Participants appreciated the training and the time to learn and plan. Although participants found CBI useful, school and district priorities, accountability, the lack of consistent follow up, and the absence of a written and adopted implementation plan impeded complete reform in the classrooms of the secondary teachers in the study. Results of the study revealed schools, districts, and the state offered professional development to provide additional support for the implementation of CBI. Five participants indicated the professional development neglected to promote sustainable change in practice to continuously implement authentic CBI in secondary classrooms.

Teachers require professional development with models for understanding how to change instruction systematically (Fandino, 2010). Four of the eight participants in this study conveyed a need for more training and models of unit and lesson plans after receiving professional development in CBI. Seven participants initially implemented CBI but they reported having to search for more information or discuss implementing CBI

with colleagues who knew as much or more about the instructional strategy. Professional development should enhance teacher effectiveness and student achievement (Harris, Stevens, & Higgins, 2011). Data from the study indicate five of the teachers abandoned the implementation of CBI while the other three continued to include concepts or other principles aligned with current content. The absence of support from school leadership and instructional leaders, buy-in from all teachers, and ongoing plans for professional development and implementation created a gap between learning and implementation.

Teachers in the study participated in the CBI pilot during a time when state standards in social studies were revised to include conceptual understanding. The state standards were supported by concept-based units developed by teachers across the state. As the teachers in the pilot learned CBI during the training, they developed concept-based units and lessons aligned with the new state standards. Situated cognition suggests learning in context expands knowledge when knowledge and authentic experiences for upcoming situations occur simultaneously (Guskey, 2009; Szymanski & Morrell, 2009). Study participants created concept-based units during professional development and the duration of the pilot.

Teachers in the pilot were empowered to implement the units with a deeper understanding after participating in the development of the units. Findings of the study confirm two teachers successfully applied the units and lessons in the classroom. The other five participants neglected mention the use of the plans to implement CBI although they experienced the same opportunity to acquire new information and apply the knowledge in context. These participants were unable to take advantage of situated cognition because they were too overwhelmed to make sense of CBI or other priorities

took precedence over the new learning and teacher created instructional resources aligned with new standards and CBI. Two districts offered teachers training in developing lessons aligned to the new standards at a later time. District trainers and state consultants planned to connect the development of plans with the attainment of knowledge of new standards. Teachers perform new learning less effectively if they fail to connect new instructional strategies with actual experience (Scheeler, 2008). Providing new knowledge in contextual situations in training is beneficial if participants commit to implement the learning as the next step (Szymanski & Morrell, 2009).

Sensemaking allows individuals to make meaning and sense of situations to advance toward outcomes aligned with anticipated results (Butcher & Sumner, 2011; Okada, Connolly, & Lane, 2010). Teachers involved in the study received professional development in CBI with the expectation of developing concept-based units and lessons to guide instruction in the secondary classroom. All participants commented positively on understanding the major principles of CBI and understanding how the principles clearly support good teaching and depth of student learning.

The literature review substantiates sensemaking as a way to achieve collective understanding of circumstances for clarification (Klein et al., 2010). Results of the study confirm individual sensemaking and in some cases collaborative understanding through a PLC or common planning among colleagues or grade level teachers. Research details sensemaking as the interpretation of individuals who will implement change through the exchange of information within the organization and define how to put change in action (Hope, 2010). Organizations experience sensemaking when individuals organize behaviors by the same meaning (Rutledge, 2009; Salem, 2007). Some of the participants

in the study worked as individuals to implement CBI. The lack of support and collaboration influenced low rate of teacher buy-in, lack of support from leadership, sense of feeling overwhelmed, and lack of time as reasons for less intense implementation. Individual interpretation and individual implementation failed to produce a sustainable organizational approach to implementing CBI.

The expected outcome of training is for significant amounts of transfer to occur (Westover, 2009). State consultants developed the CBI pilot for the purpose of training teachers in authentic CBI, facilitating the development of concept-based units and lesson plans aligned to new state standards, and supporting the implementation of CBI by teachers participating in the pilot. Approximately 10% of what trainees learn is applied on the job (Saks & Belcourt, 2006). The findings of the study revealed five participants reported full implementation initially with a decrease over a short period of time to a hybrid model or the use of bits and pieces of CBI.

Training transfer requires investigating activities to promote the adoption of new instructional strategies and ways to increase sustained instructional improvement through professional development (Richards & Skolits, 2009). Transfer of learning from training requires duplication of prior and new learning and new circumstances (McDonald, 2009; Saks & Burke, 2012). Learning from professional development is transferred when prior knowledge and new learning connect. Participants who reported having prior knowledge to build upon while learning about CBI were successful during the initial implementation of CBI.

The literature review identified various barriers to training transfer. Insufficient time and lack of support and accountability cause inadequate transfer (Hutchens et al.,

2012). A disconnect in research-based transfer practices influences the ability of a learner to implement new information on the job. Employees who failed to improve behavior and performance represented a problem for the organization (Saks & Burke, 2012). Key components of a plan to promote training transfer includes the support of leaders before professional development and a participant accountability plan after training (Saks & Belcourt, 2006). Participant indication of an implementation or transfer accountability plan was absent from responses. Results of the study highlight the lack of support from leaders and colleagues as a challenge in using new knowledge. All participants reported lack of support from leadership before the end of the pilot. Three participants expressed the local enforcement of a different instructional model or the pressure of accountability misaligned with CBI as reasons for low transference.

The literature review in Chapter 2 was focused on the relationship between learning an instructional strategy and the implementation of the strategy. The highlights of the review included learning theories, professional development, and implementation. The focus of the review was professional development in CBI and the implementation of the strategy. The examination of research confirmed a gap in information pertaining to CBI and the actual implementation of the strategy in secondary classrooms. Disconfirming evidence failed to emerge during the data analysis due to the gap in literature on training and implementation of CBI. The literature review substantiated the need for further investigation of the impact of professional development on teacher implementation of CBI in the secondary classroom to provide insight into teachers' perceptions of the phenomenon.

Findings

The analysis and interpretation of data in Chapter 4 uncovered four themes. The identified themes represented the lived experiences of secondary teachers in the study centered on CBI. Participants in the study responded to 15 interview questions. The interviews were recorded, transcribed, and analyzed using Saldaña's First and Second Cycle Coding and NVivo 10® software. The interview responses provided major themes and sub-themes for a deeper analysis. The analysis of the data provided a basis for the study findings. The themes were (a) preparing for CBI, (b) implementing CBI, (c) supporting implementation, and (d) facing challenges with implementation.

Theme 1. The first identified theme, *preparing for CBI*, was highlighted by sub-themes *teacher perception of professional development, teacher understanding,* and *teacher ownership of learning.* Teachers in various North Carolina school districts experienced variance in understanding, meaningfulness, and application after receiving consistent professional development delivered through a state-led and funded CBI pilot. Professional development experiences including teachers from different schools provides sustainable improvement (Guskey, 2009). The professional development followed a typical train the trainer format with a focus on CBI in alignment with state standards, learner developed concept-based units and lessons, and learner implementation of CBI. Suitable professional development provides meaningful and engaging experiences aligned with expectations of the learner (Guskey, 2009; Hill, 2009; Nasser & Shabti, 2009). Participants indicate the format of the professional development was a train the trainer model. The participants gained an appreciation of CBI because of the focus on concepts and student understanding. Professional development has allowed

enhancements in teachers' comprehension, instruction, and student results (Hill, 2009). Participants acknowledged CBI requires organization and thoughtfulness when planning.

Teachers acknowledged the CBI professional development was a traditional design disconnected from the unique qualities of each school represented by teachers in the training and lacking a plan for ongoing support and constant collaboration among colleagues. Participants presented views of follow up training provided by the state as unscheduled but available upon request on-site at a school or through email communication as needed or requested. Discussion of local professional development lacked clarity about the alignment with the principles of CBI and consistency with initial training. Leaders often rush the planning of professional development to immediately gain ideas and improvements (Guskey, 2009).

The findings from the study revealed three participants thought the enormous amount of information presented during the CBI professional development limited their level of understanding due to an overwhelmed feeling. All participants reported understanding CBI enough to make changes in instruction and planning. Two study participants, who lacked complete understanding of CBI after the training, adapted the new information to enhance current practice of key principles. Teachers report professional development reinforces existing practices and some report no effect from the professional development (Hill, 2009). Three teachers who failed to buy-in or felt other initiatives were more of a priority ignored the training and returned to usual instructional practices. Teachers' beliefs about teaching and personal factors contribute to willingness to introduce new practices in the classroom (Yamagata-Lynch & Haudenschild, 2009). Three teachers believed they were already using aspects of CBI prior to participating in

the pilot but they neglected to clearly explain the particular aspects and the extent of use with fidelity. All participants verified understanding concepts are timeless and transferrable and when relevant concepts were shared with students the rate of understanding increased.

Four of the participants accepted ownership and responsibility of their learning through open-mindedness, willingness, self-reflection, additional reading, more training, and collaboration with others. Teacher attendance at professional development does not guarantee change (Hill, 2009; Harris & Sass, 2010). Teachers took additional ownership of learning more about CBI because they valued the strategy as a way to plan effectively and engage students in learning. Three participants expressed the continuous use of CBI and collaboration with colleagues improved understanding and the use of concepts and additional components of CBI. Two participants did not take additional responsibilities to enhance learning about CBI or to improve their implementation of CBI. Two participants who found CBI a challenge recommended scheduling more time to learn and understand the instructional method in planned professional development. Professional development advocates named the lack of time as reason teachers and leaders have neglected to engage in high-quality learning experiences (Guskey, 2009). One teacher admitted the lack of resolve to pursue deeper understanding and to implement CBI with fidelity. Characteristics such as motivation may influence classroom performance (Harris & Sass, 2010). Five participants indicated local accountability for other instructional methods or assessment prevented further pursuit of understanding CBI for the purpose of implementation. District educators often express frustration because professional

development in many cases undermines district curricula and instructional priorities (Hill, 2009),

Theme 2. The second identified theme, *implementing CBI,* was highlighted by sub-themes *shifting instruction, progress with implementation,* and, *benefits of implementation.* Professional development planners, facilitators, and participants expect training transfer to occur after the delivery of professional development. Training transfer presents a problem even when professional development is moderate quality with no errors (Hill, 2009). Teachers in the study who participated in training assumed they were building the capacity to use the information and skills acquired in new classroom situations. Sensemaking allows individuals to develop meaning of circumstances to advance learning by the interpretation of training and understanding how to operationalize change. Participants' background, motivation, and the characteristics of the professional development affect satisfaction with professional development (Nasser & Shabti, 2009). Study participants possessed varying degrees of prior learning, understanding, and experience, to make sense of the CBI training.

All participants realized CBI required a new way of teaching with a student centered focus. Five participants understood the implementation of CBI required a shift in instruction to include the use of transferrable concepts in reorganized or organized lessons. Six participants pointed out the time commitment, the total change in practice, or the need to differentiate within CBI as unknowns during implementation. These participants reported shifting instruction required teacher understanding of CBI and an action plan to provide student centered instruction. Teachers may require a shift in pedagogy, an understanding how to influence student learning, and an ability to act on the

understanding (Lee et al., 2013). Although the participants believed in the value of CBI based on understanding from professional development, all of the participants eventually faced a breakdown in implementation due to the absence of continued growth in knowledge of CBI and the lack of support to advance the implementation of CBI.

Implementation of CBI requires understanding of the method and a plan for long term use supported by school leadership and other teachers. Participants described using graphic organizers, technology, connections to current and relevant ideas, discussion, questioning, and collaboration in proceeding with the implementation of CBI. While five participants conveyed a change in instruction or assessment practices, three participants reported little change in practice, using a hybrid or lesser model of CBI, reverting back to previous practice, or abandoning the method after a brief implementation. Classroom adoption of CBI presented a challenge (Williams & Negueruela-Azarola, 2013). Improvement efforts required adaptation to a variety of contexts (Guskey, 2009; Harris & Sass, 2010). Although teachers appreciated the value of CBI, buy-in, other responsibilities and priorities, support from leadership, time, and individual motivation led to short-term or no commitment to continued use of CBI. Barriers to change obstruct implementation of instructional improvement (Richards & Skolits, 2009). Implementation of CBI occurred at various degrees, but all of the teachers eventually discontinued the use of CBI with fidelity. Five participants continued only using the idea of concepts. Educators typically select strategies strongly aligned with current practice versus strategies with greater gain (Corcoran, Fuhrman, & Belcher, 2001).

Although the implementation of CBI was short-lived, participants recognized and identified benefits of using the strategy in the classroom. All eight teachers in the study

suggested student understanding and the ability for students to make connections for relevance as the biggest benefits of the implementation of CBI. Each participant reported advantages of the method for the teacher. Four teachers perceived CBI promoted collaboration. Collaborative problem solving represents a core element of professional development not necessarily effective although a sense of shared purpose may evolve (Guskey, 2009).

Theme 3. The third theme, *supporting implementation,* was supported with sub-themes *people supporting implementation, types of support for implementation, and influence of support on implementation.* Four study participants believed the absence of support to implement CBI contributed to ineffective use or the lack of implementation. Administrators who are involved in change influence a more effective change effort and promote positive attitudes toward change (Kursunoglu & Tanriogen, 2009). Four participants indicated neither administrators nor other school leaders assumed responsibility to support or monitor the use of CBI after the training. Leadership played a role in the success of implementation (Guskey, 2009).

State consultants were available for site-based visits or emails to support teachers but study participants believed this method was unsuccessful because the pilot ended before full implementation was achieved. Five participants had administrators who supported CBI when initial professional development was offered but when the administrator left the new administrator had different instructional priorities not including CBI. Administrators are key factors in initiating, developing, and facilitating teachers' attitudes about change (Kursunoglu & Tanriogen, 2009). The lack of support or an

organized plan to support the implementation of CBI caused teachers to abandon CBI or adapt parts of the method to their practices.

Four participants conveyed they engaged in collaboration with colleagues or through PLCs for support because they believed the strategy was worthwhile. Two participants reported the lack of organization in collaboration with colleagues and in PLCs. Support through other PLCs was differentiated depending on course taught, success of students, or unit planning for instruction. Differentiated support allowed teachers to focus on specific needs with colleagues in similar situations to increase the desire to use CBI. Two teachers were motivated to continue the implementation of CBI as a result of having time to plan and attend other professional development about CBI. The findings of the study indicated teachers in situations with PLCs or opportunities to implement CBI at their own discretion were more successful with the use of CBI than study participants with no motivation or endorsement to use CBI.

Theme 4. The fourth theme, *facing challenges with implementation,* was reinforced with sub-themes *teacher challenges, student challenges, and organizational challenges.* Teachers identified facing challenges during the implementation of CBI as a cause for discontinued use of the method. Study participants recognized challenges leading to barriers of the successful implementation of CBI. Teachers classified CBI as overwhelming and extremely different from traditional teaching methods. Resistant teachers and teachers without personal resolve abandoned the use of CBI. The findings of the study revealed teachers implemented CBI until other priorities, lack of support, or shortage of time prevented implementation with fidelity. Five participants continued to use only components relevant to current beliefs and practices.

One participant recognized student absences and personal problems as interferences with the use of CBI. When students attend class and learn key concepts, the learning is applied throughout a unit. Students missing background information such as concepts miss the connection to other important aspects of learning. The study findings highlight the need for time to develop understanding of concepts among students to ensure successful implementation of CBI.

Participants identified challenges within the school and district as obstacles for the implementation of CBI. Teachers report local mandates present barriers for making change in classroom practices (Yamagata-Lynch & Haudenschild, 2009). Teachers believed the lack of alignment between CBI and the state standards, local curriculum, unit lessons, and assessments presented problems during implementation uncontrolled by teachers. Study participants thought state and local priorities aligned with traditional models of teaching promoted teaching to the test, which impeded the successful implementation of CBI. The study findings indicate teachers defaulted to traditional methods of teaching when faced with mandated accountability and locally enforced instructional priorities.

Implications

The data analysis and results for this study indicate the design and quality of professional development and support during implementation impacts teacher understanding and classroom use of a new instructional strategy. Three study participants mentioned feeling overwhelmed after the three-day CBI professional development offered by the state. Teachers gain and strengthen practical knowledge when engaged in deliberate instructional episodes and communicating the knowledge from these

experiences (Han, 2012). There is a need for embedded teacher learning in the context of the classroom with support from the principal and other instructional leaders.

The situations pertaining to initial and follow up training on CBI, imply the design of professional development for CBI should allow adequate time for training and consider the presentation of content aligned with the needs of diverse learners to promote deeper understanding of CBI. Study participants expressed concern about follow up training from state consultants ending earlier than expected, leaving them to attend local workshops and training lacking authentic alignment with the state provided training. Typical professional development plan designs omit consideration for the knowledge, experience, personality, self-reflected needs, or teaching context in the actual classroom of teachers (Flint, Zisook, & Fisher, 2011). Data from the study indicates issues in understanding CBI stem from too much information presented at one time and not enough follow up training or support for teachers to demonstrate understanding and to move learning forward. Making sense of new strategies from professional development to classroom practice is a complex task with emerging dilemmas during implementation (Han, 2012).

All study participants reported the absence of intended, continuous support from instructional leaders for the successful implementation of CBI. High quality professional development has a focus on collective problem solving and collaborative learning sustained by ongoing support (Fickel, 2002). The study findings show support for CBI through PLCs, peer collaboration, peer observation, and personal resolve to read more and attend training applicable to CBI. The implication is progress with individual teacher implementation and implementation across classrooms requires sustained support from

district and school instructional leaders, especially principals. Principals, instructional leaders, and coaches can participate in CBI professional development and use current research to support implementation of the instructional method in classrooms. Participants in the study expressed a desire to have leaders understand CBI, integrate CBI with other instructional priorities, and encourage effective use of CBI.

Principals encounter the challenge to direct teaching and learning in the school. Study results show six participants explained principals neglected to support the implementation of CBI due to other priorities or lack of understanding the strategy. Instructional leaders require support and training for the purpose of mentoring educators in new instructional strategies (Stock & Duncan, 2010). Principals are expected to help improve teaching and learning to advance rigorous performance and at least satisfactory achievement (Brazer & Bauer, 2013). The findings imply principals should take an active role designing, planning, participating in, and supporting professional development for teachers.

Individual classroom situations must be considered in professional development planning to assure a change in instructional practices (Han, 2012). Principals conduct classroom observations and walkthroughs for information about teachers' instructional practices. Information from walkthroughs should be used to support professional development (Stock & Duncan, 2010). "Instructional leadership requires knowledge of content and pedagogy broader and deeper than any one teacher's experiences are likely to provide" (Brazer & Bauer, 2013, p. 647).

Limitations

The results of the study must be considered within limitations in the study design. Participants in the study were a subset of a small group of social studies teachers in North Carolina who participated in a state led CBI pilot with limited responses from a variety of educators. The researcher planned for a sample size of 10 but only eight teachers from the pilot agreed to participate in the study. A larger sample size of teachers in various content areas and grade levels could provide valuable insight on how teachers in diverse situations implement and sustain the use of CBI.

Recommendations

The purpose of this study was to gain an understanding of teachers' perceptions of professional development designed for participants to comprehend CBI, teachers' progress with the implementation of CBI, and supports or barriers impacting the implementation of CBI. The study participants perceived professional development as the presentation of a large amount of information. The implementation of CBI by teachers in the study was influenced by support or the lack of support by leaders. Study results suggested teachers had positive comments about the content of the professional development on CBI but believed too much information was shared over a period of three days without enough time for information synthesis.

States, districts, and schools can design a comprehensive training plan based on a needs assessment to determine where teachers are in their knowledge of CBI. Professional development designers can use the data from the needs assessment to create a plan with specific content, timelines, and other pertinent information. Teachers need

professional development opportunities with a focus on collaborative problem solving to develop solutions and strategies applicable to their local school context (Fickel, 2002).

Instructional leaders in collaboration with professional development designers should develop an implementation plan to help teachers apply CBI in the classroom including classroom embedded professional development. As teachers apply changes in the classroom, they require continuous support to reform individual and collective practice (Fickel, 2002). Teachers may require training in the implementation of CBI and differentiated support during application.

Teachers in the study believed support through PLCs and peer collaboration was beneficial in continued understanding of CBI. Teachers in the study stated this type of support occurred infrequently and lacked consistency and impact over time. Sustained professional learning that promotes Collaborative opportunities and embedded classroom learning promoted by sustained professional learning may lead to an increase in student achievement and teacher quality (Bruce, Esmonde, Ross, Dookie, & Beatty, 2010). Reflection throughout training and implementation over time will provide teachers opportunities to take ownership of understanding and using CBI.

Professional development plans including participation from instructional leaders prepares leaders to assist teachers in understanding and the use of CBI. Instructional leaders should participate in professional development for CBI and prepare to support implementation of the method. Informal observations and peer observations are methods instructional leaders may use to collect evidence of implementation. Leaders and peers can provide feedback about the authentic use of CBI to teachers using the evidence from observations and use the information to plan future training and follow up sessions.

Recommendations for Future Research

The study focused on the perceptions of secondary social studies teachers about understanding and using CBI. The voices of instructional leaders, other administrators, teacher leaders, and professional development facilitators were absent from the study. Future research could include data collection from other educators involved in the training and implementation of CBI to gather information pertaining to professional development design, facilitation, application, and supports and barriers for using CBI.

In order to generalize the findings for a broader audience within a district or statewide, further study is recommended among other populations of teachers with training in CBI. Future research between the relationship of professional development and the implementation of CBI may include teachers in grades K-12 in any content area across a district or the state. Beginning elementary teachers who are struggling and experienced secondary teachers who are outstanding are the most fitting for changing classroom practice (Lee et al., 2013). Teachers who are the most suitable for change should be considered for participation during the planning and recruiting phases. Further studies may include the collection of demographic data for comparisons across subgroups such as gender and number of years as a teacher to determine the impact of these factors on implementation. Information about grade level, content area, gender, years of service, and location may provide details to assist in planning differentiated support or may provide insight of commonalities or differences of barriers for these groups.

Chapter Summary

Educational reform offers consideration for the use of research based instructional methods such as CBI and best practices for the purpose of increasing student

achievement. Student needs are diverse and educator training varies. NCLB established a precedence for educators to obtain quality professional development to support reform in the classroom. Educators must focus on providing meaningful instruction to meet the needs of students and accountability measures required by the district and state.

CBI is an instructional strategy that promotes the use of timeless concepts for transferability of student learning. Teachers develop concepts that provide connections and relevance for students. Students learn to connect facts to concepts for deeper learning. The purpose of the hermeneutical phenomenological qualitative study was to explore the perceptions of secondary social studies teachers in North Carolina implementing CBI. The phenomenological approach permitted insight into the lived experiences of teachers. The research design allowed teachers to share thoughts, feelings, and knowledge of CBI.

The study evaluated the question "What is the impact of professional development on teacher implementation of concept-based instruction in the classroom?" The professional development examined in the study was the same for all participants. The understanding of CBI varied among participants based on current practices, individual experiences, and school and district priorities. The variances in understanding were reflected in implementation. Teachers with previous knowledge of components of CBI found implementation seamless with current instruction while teachers gaining new knowledge from the training made shifts to use certain components of CBI. Due to the lack of ongoing support and embedded practice of CBI, the implementation of CBI declined over time resulting in teachers using a hybrid model of CBI or discontinuing the implementation.

The results of the study implied teachers should understand CBI in depth to achieve successful implementation of the method. Educational reform occurs through learning and altering practices with the influence of instructional leaders (Guskey, 2009). Professional development managed over an appropriate amount of time with an implementation plan and support from instructional leaders may benefit teachers using CBI in the classroom. Teachers in the study commented positively about CBI and the professional development. Teachers blamed the lack of support and other barriers such as mandated priorities for preventing planning, collaboration, and reflection to use CBI. Participants' perceptions of professional development can assist in the design and improvement in future professional development. Educational leaders face the challenge of creating a climate that is encouraging, stimulating, and allow risk taking in order to maintain new learning (James & McCormick, 2009). Support from leadership provides a critical link between professional development and classroom implementation of newly learned instructional strategies.

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Appendix A

Interview Questions

1. What professional development did you receive in preparation to use concept-based instruction?
2. What understanding did you gain from the professional development on concept-based instruction?
3. What past experience was your understanding based upon?
4. Did you understand concept-based instruction well enough to implement it in your classroom after the professional development?
5. Why do you feel this way?
6. What does concept-based instruction look like in your classroom?
7. Is there a difference in the way teachers across classrooms in the school implement concept-based?
8. How has your use of concept-based instruction progressed since receiving professional development?
9. Who do you go to for support in implementing concept-based instruction?
10. What support is provided by instructional leaders to the teachers who are implementing concept-based instruction?
11. If support is provided by instructional leaders, how is it differentiated?
12. How do instructional leaders in your school influence the implementation of concept-based instruction?
13. What would make it difficult to use concept-based instruction in your classroom?

14. Are there barriers that prevent the successful implementation of concept-based instruction at your school?
15. What is your general opinion of concept-based instruction as a regular strategy in your classroom?

Appendix B

Artifact Review Summary Form

(Adapted from Bloomberg & Volpe, 2008, p. 204)

Code Number: CBT (1 – 10 will be added for each individual teacher)

Name or type of artifact:_____

Date created or used:_____

Date submitted:_____

Purpose of artifact:_____
_____
_____

Content of artifact:	Connection to research questions:

Additional comments:

Appendix C

Data Access and Use Permission

University of Phoenix®

DATA ACCESS AND USE PERMISSION

North Carolina Department of Public Instruction

Name of Facility, Organization, University, Institution, or Association

Please check mark any of the following statements that you approve regarding the study and data described below:

☒ I hereby authorize Carmella Fair, a student of University of Phoenix who is conducting a research study titled or described as follows Concept-Based Instruction in Secondary Classrooms which is a study of secondary teachers in North Carolina and their experiences in receiving professional development and implementing concept-based instruction access to, and use of, the non-identifiable archival data described as follows: names, email addresses, and school location of secondary Social Studies teachers in North Carolina who received training in concept-based instruction for use in the aforementioned research study. In granting this permission, I understand the following (please check mark each of the following as applicable):

☑ The data will be maintained in a secure and confidential manner.

☑ The data may be used in the publication of results from this study.

☐ This research study must have IRB approval at the University of Phoenix before access to the data identified here is provided to Carmella Fair

☑ Access to, and use of, this data will not be transferred to any other person without my/our express written consent.

☐ The source of the data may be identified in the publication of the results of this study.

☐ Relevant information associated with this data will be available to the dissertation chair, dissertation committee, school as may be needed for educational purposes.

Jane Atkinson
Print Name

11/13/12
Date

Jane Atkinson
Signature

Carmella Fair
Researcher Signature/Acknowledgement

Title: State Superintendent

11/15/2012
Date

Address: 301 N. Wilmington Street
Raleigh, NC 27601-2825

Current version 032012

Appendix D

Premises, Recruitment, and Name (PRN) Use Form

University of Phoenix®

PREMISES, RECRUITMENT AND NAME (PRN) USE PERMISSION

North Carolina Department of Public Instruction

Name of Facility, Organization, University, Institution, or Association

Please complete the following by check marking any permissions listed here that you approve, and please provide your signature, title, date, and organizational information below. If you have any questions or concerns about this research study, please contact the University of Phoenix Institutional Review Board via email at IRB@phoenix.edu.

☐ I hereby authorize _____, a student of University of Phoenix, to use the premises (facility identified below) to conduct a study entitled Concept-Based Instruction in Secondary Classrooms.

☒ I hereby authorize Carmella Graham Fair, a student of University of Phoenix, to recruit subjects for participation in a study entitled Concept-Based Instruction in Secondary Classrooms.

☐ I hereby authorize _____, a student of University of Phoenix, to use the name of the facility, organization, university, institution, or association identified above when publishing results from the study entitled Concept-Based Instruction in Secondary Classrooms.

June Atkinson — 10/5/12

Signature — Date

June St. Clair Atkinson

Name

State Superintendent

Title

Address of Facility

301 N. Wilmington St., Raleigh, NC 27601

Appendix E

Letter of Invitation

Dear potential participant,

I am a student at the University of Phoenix working on a doctorate degree in educational leadership. I am conducting a dissertation research study entitled "Concept-Based Instruction in Secondary Classrooms." I am inviting you to participate in the proposed study because you have received professional development for implementing CBI. The purpose of the study is to gain insight into secondary teachers' perception of professional development and the implementation of CBI in the secondary classroom. The proposed study seeks to share teachers' perceptions and lived experiences of implementing CBI after receiving professional development related to the strategy.

Information about your perceptions and experiences are needed and will be valued in the proposed study. Increasing knowledge in the field of education concerning professional development and the relationship to CBI may benefit the larger educational community. Depending on your preference or the method that is most convenient for you, the interview will occur through a web-based conference such as Skype™ or GoToMeeting®, or a phone interview. I will ask you 18 open-ended questions in a semi-structured interview. I will take notes and you will be audio-recorded as you respond to the questions. The audiotaping will assist me in transcribing your responses. You will receive your transcribed responses for verification before they are used in the study. Your responses will be anonymous and held in strict confidence for this study.

I have enclosed a self-addressed, stamped envelope for you to return the informed consent form required for your participation in the proposed study. I look forward to

interviewing you and sharing the results of the study with you. If you have any questions concerning this study, contact me at cgfair@yahoo.com or 910-977-0557. Thank you in advance for your consideration.

Respectfully,

Carmella Fair

Doctoral Candidate

The University of Phoenix

Appendix F

Informed Consent

I am a student at the University of Phoenix working on a doctorate degree in educational leadership. I am conducting a dissertation research study entitled "Concept-Based Instruction in Secondary Classrooms." The study explores secondary teachers' perceptions of professional development and the implementation of CBI in the secondary classroom. You are invited to participate in the concept-based study. Your participation in this study will include an interview in which you will be asked open-ended questions about your experiences with professional development and CBI.

The interview will be untimed and conducted through a web-conferencing platform or a telephone interview. The interview will occur during a mutually agreed upon date and time. With your permission, the interview will be audio taped, transcribed and returned to your for verification of accuracy. Complete confidentiality will be established and maintained. If the research study is published, your name will not be used in the study or made known to any outside party and your responses will be confidential. The researcher will code interview responses, securely store responses in a locked area, and destroy all data after a period of three years.

The research may not directly benefit you, but studying CBI may result in secondary educators gaining a better understanding of supports and barriers that exist when implementing CBI based on professional development. There is no payment associated with your participation in the study. If you decide to participate in the study, return the signed informed consent in the enclosed self-addressed, stamped envelope to participate in the proposed study. Once I receive your form, I will contact you by email or

telephone to set up the day, time, and platform. I look forward to interviewing and sharing the results of the study with you. If you have any questions, contact me at carmella.fair@gmail.com or 910-977-0557. For questions about your rights as a study participant, or any concerns or complaints, please contact the University of Phoenix Institutional Review Board via email at IRB@phoenix.edu. Thank you in advance for your time and contribution to the study.

Your signature on the informed consent indicates your acknowledgement of understanding the nature of the study and how your identity will be kept confidential. By signing the informed consent form, you are indicating that you are 18 years of age or older, you voluntarily consent to serve as a participant in the described study, and you understand there is no potential harm associated with participating in the study. Your participation is voluntary and you may decide to withdraw from participation at any time without consequence by email or phone. Audiotaping is part of the study but only the researcher will have access to the written and taped materials which will be coded to assure that your name is protected. Please check one:

( ) I consent to be audio taped.

( ) I do not consent to be audio taped.

My signature below indicates that I accept the above terms and I agree to participate in the study described here.

Date: _____

Signature of participant: _____

Printed name of participant: _____

Participant's email address: _____

Participant's telephone number: _____

Appendix G

Pilot Study Participation Letter

I am a student at the University of Phoenix working on a doctorate degree in educational leadership. I am conducting a dissertation research study entitled "Concept-Based Instruction in Secondary Classrooms." The study explores secondary teachers' perceptions of professional development and the implementation of concept-based instruction in the secondary classroom.

You are invited to participate in a pilot study for proposed research due to your experience with professional development and the implementation concept-based instruction. Your participation in the concept-based pilot study will include providing feedback on the instrument that will be used to interview participants. Review each interview question and consider the format, appropriateness, and clarity then record your feedback in the table below. Contact me by email at Carmella.fair@gmail.com or telephone, 910-977-0557. Thank you in advance for your time.

Sincerely,

Carmella

Appendix H

Questionnaire for Pilot Study

Respond yes or no for each question and provide comments.

Interview Question	Appropriate	Clear
1. What professional development did you receive in preparation to use concept-based instruction?		
2. What understanding did you gain from the professional development on concept-based instruction? 3. What past experience was your understanding based upon?		
4. Did you understand concept-based instruction well enough to implement it in your classroom after the professional development? 5. Why do you feel this way?		
6. What does concept-based instruction look like in your classroom? 7. Is there a difference in the way teachers across classrooms in the school implement concept-based?		
8. How has your use of concept-based instruction progressed since receiving professional development?		
9. Who do you go to for support in implementing concept-based instruction?		
10. What support is provided by instructional leaders to the teachers who are implementing concept-based instruction? 11. If support is provided by instructional leaders, how is it differentiated?		

Respond yes or no for each question and provide comments.

Interview Question	Appropriate	Clear
12. How do instructional leaders in your school influence the implementation of concept-based instruction?		
13. What would make it difficult to use concept-based instruction in your classroom? 14. Are there barriers that prevent the successful implementation of concept-based instruction at your school?		
15. What is your general opinion of concept-based instruction as a regular strategy in your classroom?		